

MGTGMGUJ *f* \ [L̃ \ UGH

C\ H C\ KMGO *f* N

GI [M' \ VfTUCUfI U \ ©NGV' UG

R C P V J G Q P M K C F *f* U

$C| \text{gr}^3/\text{kgpf} \quad ^2 \text{xgmv}^3/4^3/\text{no ci} \{ \text{ct} \text{dct}^a \text{u}^a \text{i}^a \text{pcm}$
 $\text{u} \text{gpvgr} \tilde{\text{A}} \text{mg} \text{n}^3/\text{p} \{ \text{xgv} \}$

Eqr {tki j vd{ RCP VJ GQP 0
O kpf gp lqi qvlgppctwprn0
Dwf cr guv 3; 650

Hgr0nkc f »<Vktkpi gt Kw^a p0
MDL0p{qo f c. Nqxc i w0420

GN U ~ 0

šMgf xgu hco. j^av o²i o kpf ki pgo ²tv^gf
 o gi. j qi { c Mgrgv ²u P {wi cv uqugo ²tv^gw²m
 o gi gi {o^auvA P²|f< p^an^wpm c vku vgrv lgrv.
 j c kf gi gpgm gn w pgo o wcvnq| wpm hgf gwgp
 h xgn= c ek r pngv c| qpdcp c vgo r mjo dcp r xgv
 l^{Am} C| gwt»rckncp^an c| wfxctkcu^ai c| v n^l
 x^aplc. j qi { kf gi gpgm gn w xgi {^{Am} rg ncrv wp/
 nev fg wi {cp kngvxp xqpc. j c c ek r pngv xgv
 p³pm rg lgrgp^rv^{Am}l^gp⁰ Ok c n²m u| go gv c
 dqul^{Am} i { ²u c i qpqu| u^ai lgr²pgm vnkpl^{Am}
 p^an^wm c n²m u| go c u| g^rff u^ai ²u c l^ui lgr⁰ Ok
 lqddt»n^deritc ^lwpm m dcr»n^lqddtc⁰ C p {wi ck
^lu vgr xcp hrgurgi gu dgv mngn co gn^lngv nk
 ugo o qpf cpcm ô o k r gf ki c rgi v³ld dgv v rg
 ugo ^llwm j gn^lgu^la uwpndcp⁰ P^an^wpm c| gi {u| gt
²rgv gt²p { . p^an^wm rgrceup {qf^au⁰ J qi { ku i qpf q/
 mf. j qi { c p {wi ck go dgt xcrj c ku o gi ²tj gp²
 c ngrvkggo dgtvA⁰⁰⁰

*Cej o gf J kno gvgi { nqt^lÄo gu²ld n⁰

*Xqnv c| go dgtk²i v³4v²pgv²dgp c n²4grv Ändcp
 gi { kf u|cm co kf p c| xqnv c n²4j k< šFkn⁰ vqt qm^l
 t»neucml»v xci { ugo o k⁰*

*G| c| kf u|cm o Ä^lrdgp xcp⁰ C v³4v²pgv gv
 crcn^l»^l t^lhcm o c o^at gn^ll^am c l^u|cp m^lkn^lv⁰ M^l
 l^ldq^wpm wucp cdd»n c pgo ²rrgp f^leu u^ai gu nqt/
 u|cnd»n co gr^ldgp c hgpv g^lx u^atp^la^v u|gi v^g c v³4/
 v²pgv k^li c| u^ai pcn⁰*

*Mgo cn Cxv^lÄtm ²rgv. o n²f²ug »v j quu|Ä. x^an^l
 u^ai qu ²xgm vngm gr⁰ G| kf crxw Mgo^an^w o gi xk^li ^l
 vq^wm lqddt»n ku dcr»n k⁰ Uqm u|go t^ga^p{^au ²tv^g,
 d^ao w^lk xku|qpv ô j qi { xwri^atkucp hglg|/Äm nk
 o cnlv^wncv ô ci {dc/h dgf^leu²t²vⁿ0*

! tfgngu jqi { o kpf n²v a n²ur qpv ki c/cv n²rxk/
ugr0 Mgo^an vgwgv rgj gv gt ugp n²k²a²rk ku. fg gt /
ugp fkei²tpkk0

Gpp²m c i²wu»rciqu gngpv²wgm o ci {ct^a/cv
gi {u/gt 0 Mgo^an ²rgv²pgm gu u/cn²dcp. co kf p
o²i c jcvr²o j q/ xg/gv wcv gi {gpi gwg. xqv n²k²q/
i^auqpkcr» xlugmgf²u²pgm u gu/n²4gkpgm o gi ²r²i²/
dgp0 Oknqt o²i c/qpdcp c jcvr²o dktvq²dcp šwcn/
nqf qwō v²gp³/w k²rk»u. ngrgvk p²rg lrgw. qtu^ai^av
cpp{k²c lgnppf ²gwg. cpp{k²e uqf^arcvqu tgh²to dcp t²/
u/gu²gwg p²r²v. jqi { g/v c v³/4³m²i ²xu^a/cfqnp
ngt gu/vAnugo j^ai²ij cvlc o gi gr²i i²0

C/ gr²tv gtgfo²p{ ki c/qrlc Mgo^an< uqntuqm o k/
rk» go dgtv vgw gr²i gf gw² ²u u/cdcff^a0 Gro ctcfqw
p²r²v lrgo gvg uk rtko k²rk² a ncrqv^ad»n cogr² o gi/
eu²lqr²uc xqv o kpf gp gwt»rck jcrf^aupcn0 Mgo^an
gn w V³/4³nqtu^ai^a rcnqu^ai^apcm nkgpexgp u^a/c²rn²
r²if^awno²i ²pk qnxcupkugo wf qw0

V²gp³/w k²rk» go dgtv go dgtj g/ o²n» uqtuj q/
lwcvq²0 Rctcu/vqnd»n rtqrgv^atqnd»n rqi^atv euk/
p^an= ²ng/gk v²ti {cnd»n gi {gptcpi^a cuu/qp{qncv.
r^ap{qncv u/cdcf go dgtngv= vcrp{c²nd»n n²4ki c/
i cv^auw. lgvf^aru rcuc/dktvqnd»n gi²u/i²igu n²4²r/
²u rctcu/vi c/fcu^ai qncv= u/cdcf. vto²u/gvu vto g/
i²w0 Mgo^an xqv c/. cnk Gwt»rc. ngrgvk eu²ein²dg
p{wi cvk a ncrqvqnev xct^a/uqn0 Okpfg/ gr²i cjjq/.
jqi { pg xgu²Am n²xgv Mgo^an Ccv²Am jk^akc. jc/
pgo nko ci cur» ²tfgo gku/gtkpvo²ncuaw0

P²rg ocic ku ô p²o gr² rgfki rgi n²4grgddt n
i²wc. ô lgn²wgp vku/vrgwgn d^ao wrcwn ²u j^ai²xcn
xcp ²u rgu/ ku Mgo^an k^ap{^adcp0 Fg c/ gi²u/ xk²i ²u
o kpf gp p²r grkuo gk o c o^at Mgo^an pci {u^ai^aw0 O²i
c p{wi cvk fgo qntcv qtu^ai qndcp ku Ai {u/»n^ap qu/
vcrp tqnpu/gpxdgp ²u grkuo gt²udgp xqv t²u/g0 Rg/
fki g/gndgp c/ qtu^ai qndcp fkn^av²tc ²u fkn^av²qm
ngx²u² p²ru/gt gn0

Pgo qm p²m²n² ²rkn o gi ²{ Mgo^an c P{wi c/
vq² ku0 C ngo^ark fkn^av²tc i²p{gi dgp ²u e²i^adcp o^au
xqv. o kv c v²/ddk0 C/ Anqtk fkn^av²qm a ncr²dcp
o wpcn²rvggp rctrc o gpvgn n tci cfl^am gn u vct^am

ng/Āndgp c/ cdulqrĀv wcrw cĀ Mgo^an²rrgp c/2tv
 xgwng ng/2dg c nk^at»rciqu jcwrcv jqi{ o gi vg/
 tgo ug c rctrwogp^vtkl^ap nqto^ap{|qw. fgo qntc/
 vñmu V^{3/4}3/nqtul^aiqv²u lgrgo grlg pgo |gv²v c o clf/
 pgo n^{3/4}2/rnqt k^anrcrqnd»r0 C lki {grw gu qrcw» o gi
 lqilc^anrc^acpk jqi{ c ocic²r^v |^{3/4}v lgrfcv^av
 eucm c/ nkctv» gt²r²x²n²u tcfkn^rku gu/n^{3/4}gkxgn
²tjgwng gr0 O²r²gp c i {^{3/4}ngtgnki ngnw o qf gtpk^aipk
 c v^{3/4}3/m p²rgv²u o kpf gp grw c tcfqw dgt gpf g/ngf²u²v
 jqi{ c/ 3; 3:/dcp. c rglv o²r²rpvl^ap^am» qtu^aiqv
 x²i rgi gupp lgrgo grlg0 J qi{ gppgm c/ gi {gwgp Āpcm
 c u/Ām²i gu²i²v o gi o wcvj cuwmm t²u/rvgugp n^rrk
 u/»pwpm ctt»n c u/2vjwm» V^{3/4}3/m Dktqf crqo t»n
 cogr^dn c/ Āl V^{3/4}3/nqtul^ai Mgo^an šfkncvĀ^alcō
 p{qo^ap o gi u/ĀrgvĀ0 Eucm o kpf g/v o gi kuo gt xg. rg/
 jgv^arp^k Mgo^an go dgtk r^ar^al^at»r0 Vgt o²u/gvu jqi {
 Mgo^aipcm i^apeuqr^kku xcppcm d xldgp0 J ku/gp nt/
 vñmu kf ndgp. Mgo^an c o xg Āl^adcp^am»ncv ô
 n^{3/4}vñm gi {nqt k dct^awkv²u v^ao qicwkv ku ô pgo
 gi {u/gt n^{3/4}p{^{3/4}vgrgpĀn lk/knckci ku o gi ugo o ku/gwv0
 Fg jku/gp Mgo^an gn w qw xqv c/ kĀ^{3/4}3/m o q/i crqo
 r²r²lc. cogr^djcwrcw² lwwv w{cp. fg. ô pgo
 x²i g/x²p²n c v^{3/4}3/m p²r vgr^dgu gwt»rck²tvgrgo dgp
 xgw o qf gtpk^ar²u²v. ô c/ qtu^ai o gi Ālj qf^au²v ugo
 wf w gr²tpk0 Mgo^an c/qpdcp kuo gt v p²rg ngrvk nq/
 /gtxcw²o w²v lcvrk²o w²v cogr^d2xu^a/cfqm crw
 dgr²kf gi / f^{3/4}v0 šfkncvĀ^alcō. o qpfjcpk c u/gtgv
 crc fknvĀ^alc xqv cmqt o²i rqrkknckci nkunqtĀ
 p²r²xgn u/go dgp0 Mgo^an r²wc. jqi{ eucm lgn²vgp
 u/ki qttcn pngxrj gk o qf gtp. o xgv: p{wicv p²rr² c
 v^{3/4}3/n^{3/4}0 Mgo^an r²wc. jqi{ jc gpi gfk jqi{ gi^apeuqr
 l^am^ccmqt o kpf gp jkĀdc xqn0 Eucm^a{ wf w v^a nĀ/
 fgro gu²x crw: 2xu^a/cfqm²cn gn ddt gxp²p²v ô
 2u g/ c r²p{gi 0

Mgo^an o xg pci {u/gt gp nk^amc c rgi pci {qdd
 rt>d^av c o^auqf km xkl^aij^adqtĀ n^{3/4}grgwng ku0 O^a c
 u/w^apk V^{3/4}3/m Dktqf crqo c/ gnu xkl^aij^adqtĀ pgi {g/
 fkn j»pcrl^adcp dgrguqft>fqw c j^adqtĀdc. c ngo^ark
 V^{3/4}3/nqtul^ai. ô l>xcn pgj g/gdd n^{3/4}Āv²p{gm n^{3/4}3/v
 jku/gp o kpf gp x²ng jcv^atqu qtu^ai jcfk vgtĀrgv ô

:

o gi tk|vg hAi igvrgp eugrgnx nrgu²i²v0 C V^{3/4}3/m
M⁴v⁴tucufⁱ c rgi x^a n^f i qucdd kf ndgp ²u rgi gzrqp^a r'
wdd jgr|/gvgnlgp ku u|k^ftf v³/o d. cogr|pgm d²ng/
cmctcv^v xcwo gpp{k n³/f pci {jcxwqo tgurgn^vdc.
dct^a v^f i^a v^a rqlc ²u ngt guk0 Mgo^a n gi {nqt k o wpnc/
v^a tuck c| qtul^a i xg|gv²udgp ^{3/4}3/m⁴ugk dk|vqu n²||gn
nqto^a p{q|/^a m c M⁴v⁴tucufⁱ jcl>l^a v g x²tgu. rwu/
v⁴uqu kf ndgp ku0 i u o ³ o c c| gwt>rek chk²ck
^a |ukc² u co g²ck² qtul^a i qm rgi pci {qdd t²u|g nqdi »
r² pi i cn ² i. pgo |gvk gtgl² dgp go²u|v fkm ô cffki
V^{3/4}3/m⁴qtul^a i o c ku u|k^ftfcp ² r³ k vx^a dd. Mgo^a n
vgu²o gpwo cm²rrgp. c| gr³3/3³gpf v^{3/4}3/m pgo |gf²ngm
d²ngqtul^a i ⁴ v^a v0

3; 650o^a tekmu 45/^a p. c O^a uqf km Xk^f i j^a dqtÀ
pgi {gf km² x² dgp0

Cu|gt| 0

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V T MQTU f I J CTEC C X T U
U WNVf P GNGP

10C n³/4p{g/g0U/crnpknk00

Cj qn n²vgl gt gul vgpf gn w Eleqtq²nv ul^a o nkxg/
 v²udgp. cj qn R^an crquvqn vctvqc dgu|²f gkv c Vj guuc/
 rnpknkdgrknj gl. kw. ngtgul v²p{ n³/4p{g|gvdgp. c p{w
 i cvk kf ul^a o v³u ul gtlpv 3: : 20 pqx0 43/2p ul \tilde{A} ngvgw
 O wul vhc Mgo^a r0

C v³/4³m wcmqo r wul v n³p{grgo d n o²i eucm
 pgo ku tqo dqnv²u v³{ uqnev o gi jci {qw U cmqo nk/
 dgp c| »nqt pci { cmqv³ uckd»r0 C t»o ck r³i k»m²r v³
 vgw Xlc Gi pcvkcp. d^at c i {³p{³/4 m \tilde{A} v i qpf q|^a/
 u^atc ugo o k i qpfqv ugo hqt f v³qw c ul crnpknk x^ark
 o²i o c ku n³p{gm gugdd c n³/4 rgn²f²u. cn qtu|^ai dgn/
 ugl²dgp. o kv c v³/4³m wcmq0 Mqpuvcpkvu f kcf cmc/
 r w|^ap o²i o c ku n³vpk c t²i k o guvt i {³p{³/4 htc/
 i^a uck: co gn gm f kcf cm gpgv^a dt^a| qrcm \hat{o} d^at dct/
 d^at ngl gm h²ttg²u n³ntg o gul gn²m c o^atx^ap{ tg/
 rghgm⁰ Gi { km qrf crqp |³/4f u²i gu d>f². c o^a uknp nku
 r²m³ rgv vrcf. o kv c hgeung²ul gm c f kcf cm kxj g| 0
 Gi { km⁰ a ukm ul crnpknk vgo rmo dcp \hat{o} o c o kv v³/
 t³m o geugv \hat{o} vgn³gu gi²u|²dgp. nkqi^a ucrcp^a mcrqv
 dcp pci {ul gt dk^a pek o q| cknqm n³vj cv»n0 O²i c ng/
 tgu| vgv ugo xcnet²m ng c v³/4³m³/4³m²u R^an crquvqn ul »/
 ul²ng ul kv²p qw o gtgf gl²i pgm c ul crnpknk jgi {
 qrf cr³p0 M³/4³m³/4³m³ c| qpdep ek³tc. n³to^a u²ngv rg/
 | ugi = | ci {xc nkcd^a n³u. r³xcpv³k p{ \tilde{A} ui²u0 C| we^a/
 n³pp c n³ngv³ twj^a| cv gl gl²ng x^a nq| cvdcp qnxf³/4|
 ul g c v³/4³m ur cp{qn dqni^a t. cr^a p p²r xkugrgvgn0

C x^a tqupcm pkpeugp v³/4³m l³ngi g0 Ncnqu^a i^a pcm
 gi { km h³ng ngtgul v²p{. nku t²ul g v³/4³m o^a ukm t²ul g
 ur cp{qn | ukf »0 G| c t²vgi o ck per ki o gi vctvqc pgo /
 | gk ucl^a vqu^a i^a v. xkugrg²v. ul qn³ uck0 Fg c | ukf »u^a i

pgo eucm wtcnqf km c x^atquqp= c | ukf » u^ai | u| qri^an ku0
 \ ukf » c dcpn^at. fg c| weck ek^r wku | wku. c dqcf | uk
 c j qtf^at. c j co^an ku c|. C eu » pcnqu. c nqx^aeu. o gi
 c dqt d²n^l ku0 Vc^ap eucm c r k chctci » o gwgt/go dgt.
 c j kxcvcpqm²u c ncvqpc o qj co gf^ap0 I ^{3/4}^{3/4} ngx²u
 xcp U| cnqpknk dgp= g| gm rgi v^{3/4}ddp{ktg ngtgungf n0 C
 | ukf » m pci { qp xcn^auqum u| qo devqp pgo f qri q| pcm
 gl²tv u| qo devqp o kpf gp Ā rgyv ô c ngtgu| v²p{gn^av
 ku ô dgl^atl^an0 O²i c pci { dcpnqm ku. o kv c| Qwq/
 o^ap Dcpm xci { c U| cnqpknk Dcpm ku dgl^at u| qo dc/
 vq0 O²i j cl » pcm ugo²tfgo gu nkn^apk u| qo devqp.
 o gtv pgo cnef o wpn^au. cnk nktcnqf lqp0 C u| qo dev
²u xcu^atper c x^atqu n^av Āppgr per lc0 O gi vct^vuwntc
 o ci wm c j cv » u^ai qm ku Āi { gnp gn0 C o w| wo^apqm r²p/
 vnglg l » hqto^ap pgo ku Āppgr0 C v^{3/4}^{3/4}m wtcnqo ^{3/4}/
 u^a| cf km²x²dgp U| cnqpknk o²i o c ku kf gi gp x^atqu0
 ©ppgr per c| v²p. cnk pgo o qj co gf^ap. qw vqmp i
 ci { ^{3/4}p{^{3/4} hgnx²u vgi gtr ctvq0

C hgnqpw^au hguv k n^aw^ap{qu^ai0 MĀi^{3/4}p^{3/4}ugp c|
 cuu| qp{qm xkugrgv²tfgn^au0 U| p^rqo r^au twj^alwm hg/
 rgw. t^{3/4}kf. rt²o d²r²u²u rt²o o gn u| gi²n{gl gw | g/
 n^av j qtfcpm co gn{ ngdn^agv eucnpgo vngugp hg/
 fgvgp Ān jci { lc0 C n^{3/4}²uki p{kqw euk n^au kpi geung
 ku cki hgf k o gm^agv0 C u| qnp{^av rkr. | ^{3/4}f. x^{3/4}^{3/4}u.
 xci { o^au u| p dtqn^avd » n ugn{go d n xctt^am j^awn
 o^au/y k^au u| p. c u| qnp{c u| p²v n ku gn^av. ngrgvk
 o kv^am en u| w. pgj²| ugn{go n^{3/4}²p{ hgf k0 f rt²o gu
 o gn^ap{ng cn » n c euk ng kpi h²p{gu hgj²tu²i g ncpf kn^an
 gn0 C xkugrgv i { ^{3/4}pi { ^{3/4}u. xci { vqmcu hglf^au gi²/
 u| p²k nk co gn{gv u| p²gu ugn{go ngpf nd n xcttvm
 hguv k o » f qp ^{3/4}u| g0 Go gmgw c| ki c^ap o gi ner » xk/
 ugrv o gmgw. u| go u²tv fkuu| qpcekc c hcvrdd n^a/
 p{qm gwt » rck xkugrgv0 p² r²u²u u| p²t²m^agv^av
 xku| km c o qf gtp ^{3/4}^{3/4} n^{3/4}²u cp{ci^adc²u hqto^akdc0
 Rgf ki c|. co k c t²i k pgo | gvk xkugrgv dgp u²r. c uqm
 pgj²| ugn{go. d^atuqp{. vctnē u| p²u²mu| gt c| ugj qi {
 ugo Ārk m c| gwt » rck p k f kxcvj q| 0 C i { ^{3/4}pi { hgn^av c
 u²r cuu| qp{ o gmgw r²r ngf c n^ap{c= hgl²p | ^{3/4}f vqmcu.
 o cfctcu. xci { xk^ai qu ner. euk n^au icn^at c x^an/
 n^ap²u ek^atc gwt » rck twj^av j qtf0 C u| cnqpknk h²thcm

|3/0 g j quu| À ugn{go n^{1/4} gp{v j qtf0 Fgtgmwnup x^{3/4}4u.
 xci { n^{1/4}m ^{3/4}xgn n^{1/4}km^a v c n^{1/4} gp{v= hngwg o²i gi {
 rt²o o gn d²gnv | wddqp{v xkugrpgm0 HglAn^{1/4}p hgl 0 J c/
 lwnev c| gi²u| hglgp t^{3/4}kftg p{^{1/4}v^{1/4}n0 Ur cp{qn. i^{3/4}
 t^{3/4} ^{3/4}. cnd^a pv. v^{3/4}4^{3/4}n^{1/4}4. n^{1/4} vpk v^{1/4} u^{1/4}qnvwe^a nup0

C x^a tqudcp ki gp uqm c o wcx»j gn(0 Gi²u| we^a m
 j quu| cpv² pgn^u n^{1/4}x²j^a| cm v^{1/4}pevto gm²u v^{3/4}4^{3/4}m
 u|^{1/4}pj^a| cm^a npcn0 C v^{1/4}pevto gndgp pgo ki gp n^{1/4}pk
 p v. jcpgo l²thk l²thkgn v^{1/4}peqr0 C o wcx^ai² l²n^{1/4}
 v^{1/4}ldcp i {cntcp c i^{3/4}4^{3/4} ²u v^{3/4}4^{3/4}m n^{1/4}gi²p{gm n^{1/4}4e^{3/4}p^{3/4}
 o gi u| wtn^{1/4}n^{1/4}u^a xcn²u c j qnwgugm gncnet^{1/4}u^a xcn
 x²i| fkn0 C|² pgn^u n^{1/4}x²j^a| cm p²o gn{kn^{1/4}dgp ^{3/4}o²p{
 n^{1/4}p{qm v^{3/4}4^{3/4}m u| gtm² gu² pgn^v | gpi gf g| pgm v^{1/4}peqrpcm
 ku j q||^a0 C v^{3/4}4^{3/4}m r wdrkwo. n^{1/4}x² o gngw j k^{1/4}gvgv^{1/4}
 pcku^a i i cn p²| k c n^{1/4}p{ gi {^{1/4}Ä { f^{3/4}pi²u²v. co gn{ kp/
 n^{1/4}dd j cuqpr^{1/4}v c| kwcu go dgt kpi cf q||^a j q|. o kv
 v^{1/4}pej q|0 C o wcx^ap{j q| gi { o cpf qrkp²u gi { j g/
 i gf ekpeqi 0

U| cn^{1/4}pkndgp c v^{3/4}4^{3/4}m go dgt guk u| »tcnq||^a uc<
 c rcpvqo ko 0 Gppgm ku xcp l» p²j^ap{ o Ä uceuctpqrn0
 Qn{cp dqj »enqf^a u l²rg gl. fg²n u| » p²mÄn o qpqv^{1/4}
²u u| qo qtÄ n^{1/4}cf^a udcp0 C v^{3/4}4^{3/4}m l²thkcm i {gto gng^u h^{1/4}
 i {grgo o gn euÄi i gpgm c l^a v^{1/4}nup²u eucm cmmqt o w
 vcl^am p^{1/4}gxg²uugn²u n^{1/4}qrqi^a ucn v^{1/4}vu||²uÄngv. j c c
 u|^{1/4}prcfqp xcrcnk^{1/4} o gi tÄi pcm xci { o gi eu»nuprcm<
 gl c n^{1/4}v o qv^{1/4}kwo hgn²v^{1/4}gpÄn j cv0 C rcpvqo ko gv ku
 o cpf qrkp. xci { j gi gf n^{1/4}l²tk0 C fgt²m dcm^{1/4}pk v^{1/4}
 t^{3/4}m tgp^{1/4}t. cnk c u|^{1/4}pj^a| clvcl^ap^an c lgi {gv u|^{3/4}k
 c| gwt»rckm»npgo n^{1/4}tkc lgi {g^{1/4}0

C|² pgn^u n^{1/4}x²j^a| cndcp o gi xkugr qrcu|² pgn^u/
 ugm | gpi gpgn= c urcp{qn²u i^{3/4}4^{3/4} r wdrkwo r gfk i
 t^aÄk c tgh²p^{1/4}0 O^a ujqn o gi p k | gpgnetqm o w ukn^{1/4}n^{1/4}
 pcm²u² pgn^urgpm j q||^a0 Rtqi tco o lwn< c šM^{1/4}4^{3/4}Äk
 n^{1/4}p{ö. c šHkuej gtp. fw mglopö²u c| cmmqtldcp j^{1/4}tu
 qr gtw< c šHwteuc j^a dqtÄ0 Euqf^a r vqu. j qi { cj qx^a
 j Äu| »tc crw grlw c xcuÄv. qfc j Äu|²x n^{1/4}gm j qi {
 ekxrk^a ek» ku grlwuq^{1/4}p0 C šM^{1/4}4^{3/4}Äk n^{1/4}p{vö gi²u| U| cn^{1/4}/
 pkndgp² pgn^ukm²u r gfk i v^{3/4}4^{3/4}m ^{3/4}o²p{. i^{3/4}4^{3/4}. qrcu|
²u urcp{qn hqtf^{1/4}u^{1/4}dcp0 Ugn^{1/4}ku ugo wf lc. j qi { gl c
 fcno ci {ct0

U crmpknkpgm gi {km²tfngnu²i g c Yctfct/wec0
 Kv c tgpfgu hfgw dcl^atqp n¹k¹Ān o kpf gp f²nw³p
 p²i { »t^awⁿ ng|fxg ukngv |cllen x^au^ttv eucrpcm c
 urcp{qmn0 C x^au^t |clc c x^atqu o kpf gp |w^adc gn/
 jcv0 HĀn²tv jcp|cxt. ô o gtv o kpf gpnk hgpp/
 jcp|qp jkfgk c rqt^vn¹l^av ô c h¹m¹a^m i {gtv^am
 p{kmgo gpe²m n¹pi l^axen²u i qo qn{i » hĀm²xgn u c
 ô uĀn/h x²vggm ô d |²xgn u|ci^axen gi {Āw qn{cp
 kphgt^arku jcv³uv vgu| c| gwt»rckntc. jqi { cjjq|
 hqj cv»v crki n¹r|gij gv c| go dgt0 C| wec x²i gu/x²/
 i ki euwrc dqnp{fud»n²u hĀm²d n^am co gn{gndgp
 o²u^atquqm i {Āo³eu³u³m |³f u²i gugm jrcugo dg/
 tgm jcrk^av lqj jvtqv²u mĀn²pl²ng²f gu²i gv^atw»
 šU gngt|uknō. r²ngm jĀ|^am o gi o ci wnc0 C| wec
 n¹4 gr²p hgn¹q¹w cu|vcrnp jĀuv^atwⁿ gi {³4 gi go/
 dgt0 C| cu|v¹v i {gtv^axen xk¹i f¹lc0 C i {gtv{c.
 co gn{gv r wu|c ng|²dgp vctv. c ng|²tg euwtqi 0 Qf²dd
²f gu²i gv²u uclqv n¹p^an gi { j²v p{qre²xgu rku nqu
 nku¹p{0 C p{f¹v v |jgn{gnv. co gn{gnv c uĀn qncl
 u|ci c²u nqto qu hĀm²g u|kpv o gi n¹4 gn¹gv²pp²
 vgu|. euqrqtqm^am^am n¹4Ān²u jcp|qucp vgtghet²rxg
 v²h¹m¹q|pcm c| ctte l^at» x^au^ttnⁿen hgj²tp²rrgn0
 C v |jgn{gnp jcrv. xci { šngdcnqō. rgeugp{²v uĀ/
 pgm v³4³m o »ftc p{^atuqp0 I gu|vgp{²v r k¹pcpm
 u| nrx²rdg vnc¹tv tk¹un¹uc²u jĀm²gx²ngv h |pgn0
 C jcn²u c r³4n³4n f qncl d |g o ci cutc u^am p²j qn
 crki n¹vpk^av telc0 G|gtl²ng u|f¹p. jcp|²u kncv v³/
 o gi g qutqo qrlc c|²t|²mul gtxgngv²u c| kf gv²xgf v
 šlqdd go dgtgnō gm¹dwkc p²|km gl v c o q|i²nq|. |ci {xc
 v³o gi gv. co gn{ c| we^av vnrpi^auki o gi v³nk0
 C u|crmpknk nkur qn^at. krctqu²u o wpn¹u c|qpdc
 dqrf qi pem²t|k o ci^av gddgp c |ukxcldep0 | u xcp ku
 xcrc k ki c|c<pgo ku qn{cp tquu| fqni c|. grxgi {Āpk
 c v³o gi dgp0

—i { p{qre »tc v¹ldcp c| gi {km o gn²nwe^ad»n
 x¹i o w¹ukn¹v²u nwtlqpi cv³uv jcrmpk0 Ncnqf cm cu
 o gpgv l³p0 C| gun¹x v U crmpknk dgp o kpf ki gvg. c
 xceuqtc w³pk kf dgp vctv^an0 Gu r g f ki pgo c vgo/
 r nqo dcp. jcpgo c x ngi²p{ n¹n¹u^ap0 C x ngi²p{ p^au|/
 pci {c c ncnqf cm cu p²rrgn gm gi { c o gp{cuu|qp{/

2t0 C p^au|pci { rnpv x^at. c x rgi²p{ n²v rgi n³4/g/ rddk 3/4gi ddt tqnqpc r gfk i hgm gi { c r^ap{2t0 U |p/ rnv gt u|cmcn j q| |^am r. 3/4u| ghqpv ngl gkndgp. o kv c i {gto gn^am c ši »n{c xku k c h^a vō l^a v^anqv l^a vu|^a n0 G| cpcm c lgn^ar g. j qi { o kn{gp pgj²| u| x^agn cf l^a m qf c c u| Ān m c r^ap{wnc0 Npvc| v^ap c p^au|pci { xg/ |g^au²xgn f w^axcn u^ar^acn²u v^ao dwt^axcn o gi kpf vn c rncqfcm cu o gpgv0 G| xqncn^ar gp c o wnc^ai 0 C x / rgi²p{ j^a|^adc o gi kv gt u|cmcn xku km hgn c r^ap{v²u qw 3/4u| ggungkm n^av0 C| v^ap v^apeqpcm tgi i rki 0 Ncnqfcm cu gd²f jgn{gw c|qpdc eucm²rrgp c r^a/ p{qncv n^ap^a n^am²f gu^ai i i gr0

Fg U|cnqpknk ngtgu| v^ap{ š^ak n³4 3/4p^ai² pgnō ku xcp gi { m^av^at² r^agl gvg< c| qrcu| qr gtc0 C n²vo grg/ vgu u| p^aj^a| dcp Rweekp^a. Xgtf kv. Ngqpecxcm^av l^au| / u^an0 C p²| v²t r^aj qn{ck rctngwlg o kpf gp guvg u| p/ Ānki o gi v^arn0 O²i c n^ancu^a Ān ku. co gn{gv kw šr etc/ fkuqpcnō j x^apcm v^ar^ap^auki vgrg xcp0 U|cnqpknk u| g/ tgvk c |gp²v0 C l^an³4 3/4w n³4 3/4p^ai² r^au| »nci qu n^av^a rku u| kv²xgn nk x^a» gmgp²vdgp^a m c| gn cf^au. co gn{ u| qo qt^a o gi eu^ah^aq^auc c| ki c| k qrcu| o w|uk/ n^apcn0

(00) Crk Tk c chgpfk U|cnqpknk r qn^atc. pgj²| hllgn j ci {lc o quv cddc guk u²v^al^av c x^atqudcp0 G| c x^atqu ki c|^ap o kpf gp. eucm pgo v³4 3/4n0 O kpgm ku n^am c r cf k/ ucjpcm gi { kn{gp gdj kv. u|gpw²i gv eu^ah^aq^a x^atquA J^av^a hqtf x^a vj^av c U|cnqpknk »x^atqupcm grkpf vn cttehgr². cj qpp²v u| cdcf r^axgi v j q| c u²r0 C u²n co gn{ c v^api gt hgn n l³4p0 M²t c v^api gtrctvc²u c tgr gf gl gw o »n^ap u²v^an x²i ki 0 C| v^ap r^aĀn c o »n^a x²/ i²p c| gi {km xcui { t u. cncuq{ n^an³4 qu| nr^atc0 C v^axqrdcp c euk^anci qm gl t^agk o kv crt» u| gp^a pqud/ i ctm xk^ai p^apcn0 Vgnk^avgv t^av²xg^a c| Qn{orwu j »xcn vncv eu^aeu^atc0 C eu^aeu^av c j qf xk^ai c o quv n^antg hgu^a0 C eu^aeu^av co gn{dgp j clf cp^a dcp Lw^ak vgt u| »tv xk^ai o ck. o c r gfk hqtcfcm^at o ceg^a »p o ctvc »eqmcp{^a| pcn0

110Gi { r' / cf } » o gi u / Ārgvkn0

Crk Tķ c ghgpfk U cmplnk o gf k^a n » r qn^a tc.
 gi {² dn² pv vku vgu hcngtgungf² u p { wi cm c | qw x^a o /
 vku } 0 J^a | c qw^a nv U cmplnk j^a | t gpi gv² pgm f² rk
 t² u |² p0 C šj^a | ð u » v c | qpdc p gl gugvdgp pgo knkn
 v^a n^a i qucp nqo qn { cp xgppk ô pgo xcn » u | p . j qi {
 gwt » rck go dgt cn² t eucm gi { r gteki ku l » n² tg | p²
 o ci^a v cddep c l^a d » n xgtv hcn » n x^a n { qi d » n² u p² /
 j^a p { v² i r^a d » n² r | gw. j quu | Ān^a i l² p² i { u | 3/4 dgp.
 co gn { gp dgn Ān Crk Tķ c ghgpfk p² j^a p { ncn » u | qd^a lc
^a nq w0

Crk Tķ c ghgpfk j^a | vct² uc² u dgtgpf gl² ug ku
 u | gi² p { gu0 C u | qd^a ndcp gu² pn² pv rgt » rgwo² u
 hci i { Āi { gtv { c xk^a i | v ô u^{3/4} vgf² u w^a p c | qpdc p c
 euc^a f kpn^a dd cn^a f pk v² t. ugo j qi { c tquu | xk^a i | v² u
 o m^a gw hgppo ctef lqp0 HĀf u | qd^a pcm cpi qn kngo /
 j gn { pgm vgo² u | gvugp ug j | g. ug j co xc < fg gl pgo
 ku cpp { kc c j^a | w^a pcm j kd^a lc. j cpgo c nqt² ² u c
 Dcm^a p² 0 J qi { pg. j ku | gp pgo ku qn { cp t² i gp o² i c |
 qu | v^a nqm² u o ci { ctqm wcm^a f » l^a pcm ugo xqrv c
 j cvm cu. uqnu | qd^a u uej^{3/4} pdt wppk rcm^a v² l^a dcp gi { gv
 n^a p hĀf u | qd^a lc ugo = c eu^a u^a t o ci c r gf ki. o kpv
 i { gto gm² r r gp c dwi dgrik ut^a | uc kngo j gn { g hrgw
 r² x vpw » u | qd^a dcp p wgn

Crk Tķ c hc. ô o gtv xcp švt » p^{3/4} n^{3/4} u gō ku Tķ^a /
 pcm ô hrgwg rtlo k^a k n^{3/4} p { gl gvdgp eugr gtgf gw hgr0
 L » ngj gv Crk Tķ c ghgpfk c | Āi { p^a xgl gw šĀtk qu | v^a n /
 j q | ð u^a o | gw. ô gl c | šĀtk qu | v^a n | ð Āi { ² nv U cm /
 plnk dgp. o kpv wi { cpcnqt c o xgrv p { wi cvq p c |
 gi² u | gi { u | gt p² r t² vgi gn0 C n² u ddk V^{3/4} n^{3/4} nqtu^a i
 l^{3/4} f l² t n U cmplnk gi { nqt k w^a pcm Elegt » pcm o qp /
 f^a uc o ctef v hgpp c n^a i lgn^a | gvugddgp. cnkv n² v
 gl gt² xxgn gl gn w ngn^a f vgm T » o^a d » n c | gi { km² v xqrk
 r t x l p e k^a dc. t » o ck vctvo^a p { k n^a to^a p { | » pcn0 Ek
 egtq o gi² tng |² ug w^a p gl v² | v c j c | c <

ô Kv eucm l^a vj qnev² u r^a u | vqtqnev vcn^a nco 0 C |
 gn ddkgmc | kpv n^a i gpugddgn0

(00) Crk Tķ c ghgpfk euc^a f l^a pcm j² v^{3/4} pcr lc.
 pcr k² u² vng |² uk tgpflg ugo uqndcp m^a v^{3/4} pd^{3/4} v^{3/4} cv

»n cj qi { c| ugk uqmu^a| ²xxgn gl gn w ²ngn0 C j ²v
 n³/4 per qnev c r²pvgnk ô c o w wo^a pqm xcu^a tper lc
 ul cni^a qvc l²rdg0 K³l gpnqt K³v gpvku³ vgrgv j Au² u r k³ h
 xcrc0 kpv xgpf² i gungf² u xqnv c x^a nq| cv0 C| v² p o gi kpv
 gm³/x gvn³ vgm c j² v³/4 per qm= c eucn^a f hglg ul^a o^a a^a tc
 c hcvgr gm n³ vqi cv^a uc. ul^a o^a n³ m cl^a p³ uk ngxg³ k³ hq/
 i cm c|^a uc= c eucn^a f cuu| qp{ c ul^a o^a a^a tc c u³ v² u/h |² u.
 o qucv^a u i qpf lek n³/x gvn³ | j gvn0 C| kf ugdd ng^a p{/
 i { gto gm ul^a o^a a^a tc c| kunqr. c hcvrcdd i { gto gm c
 h³ A c eucn^a f d³ u| ngu² i g c šv³ »p³/4³ n³/4 u³ < c nku O wu| /
 vch c ul^a o^a a^a tc r g f k i . c dqrf qi l^a v² m u| cdfc »^a t³ k0 K³l gp/
 nqt c nku O wu| vch o gi kpv ngf x² tg l^a v u| j cvqw.
 »eune. n³/4 per k twj^a dcp. co gn{tg pgo ngn³ gw xk/
 i {^a | p³0 C ul qo ul² f qm hckxcn ul gtgvw l^a v u| cpk ul »/
 d^a dcp. wf xctqp² u p² j c dk qp{ c| we^a p ku0 C³ k Tk c
² f g u c r l c. c| Cm³ j dcp dqrf qi wv pci { c r c. c eucn^a f
 gn ngn u² i² p gm l gm³ r g. c| gi { nqt k eu^a ul^a tk ncvqc/
 vku v. dk qp{^a tc d w i » p hqi qw xqpc u³ | l^a dcp. j c c
 j g v f k m o g p p { q t u l^a i d » n j w k m » n n³/4 A n² x g. ngn w/
 nveun³ n v xqpc gi { hgn³ t² ugp^a v c l³ f t g² u h³ p c m
 h³ v c u| cm³ p k k j k g v g p x^a t q u r q t q u w e^a k p n³ v c x q n /
 p c. x^a u q w i³ /4³ n³ /4 n³ /4 m g n x l j q i p k u l » t e n u | p k
 co kpv ² r r g p xcrc0 k eu³ n³ /4 p {³ u u| co^a t h³ A n g k v j w k /
 i^a n^a n⁰

C| we^a p l^a v u| » nku O wu| vch c| qp dcp gi { m³ /
 n³ /4 p³ u u| go r q p v d » n hgn³ g j g w g x q p c c x g t u g p { v c n q /
 t q p^a u w t e m u f » j^a | c m³ u c t l c k x c n k u 0 W i { c p k u O w u | v /
 l³ p c m u g o x q n v e u c n^a f k p g x g 0 C | g i { u l^a n š O w u | v /
 l³ p o . c š M k^a n e u l q w o / q p n³ /4 A n o^a u p g x g p g o x q n 0
 J k u l g p g m u t k d c p c n g i v³ /4 d d v³ /4³ m e u c n^a f p c m g m u t
 o² i p g o x q n v p g x g 0 ô Q f c v g j g w g x q p c c h³ A
 p g x g o g n² .. O w u | v c h c k d p C r k T k c o ô f g g l² r /
 r g p c p p { k t c p g o . x q n v u l q n³ u q u . o k p v c j q i { c
 v³ /4³ m Q | o^a p . c r g t | u c M c f | u k / f k p c u | v k . c
 š M e r g v J c d u d w t i l c k² u D q w t d q p l c k o p g o v g w² m n k
 u l g o² n³ k p g x A n o g n² e u c n^a f k p g x A n g 0 X q n c m w i { c p
 g i { g u g n n g n e u c n^a f q m M q p u c p k p^a r q n d c p . c o g /
 n³ g n p g m x q n v e u c n^a f k p g x A n 0 G l g m t g p f g u g p x c r c o g n³
 j³ | g u r c u^a p c m n g u l^a t o c | » k c n k m p g x A n o g n² q f c /
 d k i { g u l v g w² n c C r k V g x h k m x c i { ² r r g p J k r o k š r c u c /

|^af²ō ô co k cpp{kv lgrgpv. j qi { Crk Vgxlkm xci {
 J kro k r euc pgtpl gw²i gdgrk ô fg kn{gp l²p{ |²utg
 U cmplknkdgp Crk Tķc ghgpfk j^a|^adcp ugpnk ugo
 i qpfqn0 Gi { go dgt^{3/4}v ugi ¶v o clf eucm gl gp c dc/
 lqp= ²r r gp Crk Tķc O wul vhc hlc x^anq| vclc o clf
 o gi gl v c| »ufk ul qn¹uv. o kw³p ko o^at jcto cf ul qt
 eugt²n o clf ku pgxgv0 tgpfgk o clf gn j qi { o lp/
 fgp v^{3/4}m n^{3/4}grgu eucr¹fk pgxgv hrgppk ²u gl | gn o gi /
 ul Apvgk pgo | g²vpgm gi { km ²xu^a| cf qu hgn³vk j kd¹a v0
 L». j qi { c O wul vhc i {gtgm nkunqt^adcp Dgm vcr¹n'
 o^ap{c pgo xqnv o²i gmgltgfg. m³pdgp pgj gl gp
 rgw xqpc gm²r | gnj gv. r²r^awn U cmplknkdgp ô gi {
 vgrhqp³p{x0 O²i l». j qi { c| cf »lp²vugngv wf r¹km
 j qx^a nk¹| dgr¹gpk c uqm O qj co gf pgm Crkpcm ²u
 O wul vcl¹pcn0

Kl{gp cf »lp²vugngv m³pdgp Crk Tķc ku nerqv0
 C hc¹ngv pgo o gpv l»n ²u i qpf n^{3/4}|^{3/4}p^{3/4}v dg c euc/
 r¹fdc0 C nku O wul vhc gmqt¹kdcp ngt¹v ²r r gp grgo k
 kunq¹dc. o kxgn ²r dg^{3/4}n^{3/4}vg c jcv¹km ²x²v. crt»
 i {gtgmqt^apcm rgi hgru v^{3/4}m j cv¹t^av0 Xcn¹uqu ²fgu/
 cp{lc gt ng²u²tg c| ²fgucrlc dgrgi {gl gw. j qi { c
 ul ng. n²m | go h¹eunc c jgn{dgrk Hcvo c/O qn¹j
 gi {j^a| kšnkunq¹dcō l^atlqp0

C h¹eunc ²r¹pm ²u qnqu0 Ct^ap{rci ul ²rgueuqpv^a
 ul ^{3/4}rgvu v¹thgl²j gl pgj gl gp kngw c r wj c. ul ng
 j cl0 Qttv^{3/4}p²n rghgr¹ p{Arkm ²u o clf pgo ^{3/4}ul g²t
 x^{3/4}u^{3/4}gu ul go ^{3/4}f^{3/4}ng0 Pci { . vku vcl kul gu. nkui² o g/
 tgxgp p²| . ul ²r. n²m ul go gk xcpnc0 P go kn{gp m³/
 ugl v^{3/4}m h¹eun¹m ¹ngm kngwg i w i qncm c Hc/
 vo c/O qncj kunq¹c ul gm | gwgp. ul qd^apcm ku nkeup{
 ..gn cf »/vto ²dgp0

C nkuk^a m³pdgp c| crl^atc ¹v0 Crk Tķc ku
 kn{gp Ūgn{go j cl^a ¶kgrv ul go ^{3/4}f^{3/4}m. ²r¹pm h¹eunc
 xqnv xercō knqt0 Crk Tķc rktqu hg| vnetvc nqr cu| /
 u¹ic. rghgr¹ mwpnqtqf » dcluc ²u c| ²xv¹gf gu ²rgv¹/
 fgrgo dgp o gi ngo ²p{gf gw ul^alc. rgtul g o c o^at pgo
 uglvgw. j qi { Crk Tķc ku xercō knqt p{ i^{3/4}. ^{3/4}rdg/
¹ñ . uko qi cv¹uvx^a i { » nkui { gto gmrgj gvgw0

C nku O wul vhc crl^aj q| ¹v0 Crk Tķc hrgu²i g.
 \ wdglc J cpwo. vto gvgu. ul ²rgu. eugrrgv ugo ul ²r

cuu| qp{0 N²p{²dgp ku o gt gmgp²vg l²tl²pgn0 C l²tl
 rcuuÀ o q|i^auÀ i qpf qmuf». ¾¾¾m² ¾po ci^axcn xk/
 v²|». gi {²dn²pv c| qpdcp ki gp o qf gtp u| go r²rgv
 go dgt0 C| cuu| qp{ c| qpdcp nup| gtxcm²k. vÀn xcm²uqu.
 u| w²pj ²k vgtgo v²u. cmkpgm c o gi u| qnuw ²rgv²4x²/
 p{gm c nupucpv²kp^arqn{k rcf kucj. c u| cmkpkkk h/
 k^ao ²u c Hc²o c/O qmcj kunqr ki c| i c²wlc lgrgp/
 vgw c xk²i x²i²v ²u c v²4x²p{0 Cj qi { \ wdgk c
 J cpwo o²i gi { À nup{jctgegr vgv pgo xqrv jcl/
 rpf» nkr t>d^arpk À { pgo xqrv jclmpf» l²tl²pgm
 eddc ugo ki c| cv cf pk j qi { c nku O wu| vcl^av lqdd rppg
 c u| cmkpkkk ..htgpnkō. c|c| ngtgu²v p{ kunqr²m gi {k
 n²dg cf p²0 K²wi {cp Mqt^ap j gn{gw cpi qm. ctd ²u/
 lgrgm j gn{gw h²k²n²v ²u rgt|uc Hk²f wu| k²xgtugm jg/
 n²gw vqtp^av vcpwv xqpc c nku v²4¾m fg j^av \ wdgk c
 J cpwo pgo gpi gf gw0 C nku O wu| vcl^av vj^av c Hc/
 v²o c/O qmcj kunqr vcp^at^aw²n vcpwnc pgo uq²tc c|
²rgvj gl u| Àm²i gu rgi hqvqucdd fqi qm²v0 T²¾k²f gup
 c| v²p xcn>dep qf^aki ku xkwg. j qi { n²k²Àt n w²f v c
 u| vppkc nerk²m gi²u| p²xuq^av Mqt^ap/u| À^am gi²u|
 ut>lf²kv gi²u| c u^a| j wu| qpj cto cf km u| À^aki ô ²u
²u { vx^add0 Kc|. j qi { n²¾ dgp hqi cm c ugo xqrv ct/
 t>n j qi { o k ku c| c xk²n²o. j qi { o k v²dd< gi { ngv/
 vgf. xci { j^atqo ¾¾¾A Gi { Pcr>rgqp pgx À^ar²v/
 |²u²t n ugo j cmqw dk qp{^atc0 G| gn u| go dgp c dq/
 p{qn>fqw ²u| ulgrgm vcpw²u^axcn ku ²xgnp^av i {¾¾¾/
 v²m ô o²i j quu| À k² o À^akc ugo kuo gtvg rgt| g c
 u^a| l²rg ²u| ulgrv0 C r^atj w| co qu htgpnk/kunqr²m p²¾
 xgpf²ngk xku| qp v gl cmw o^at t²i ²tf go rgi gu. nuqo qn/
 fqi qm²vcpwj cvcn0

C nku O wu| vcl^apcm j c o clf hgrp ²u c| ^amco
 o kpf gpj c²w hglg rgu|. gi {km gnu fqi c rgu| c v²4¾m
 vcp²ukv o gi tghqto^arp²u c| cpp{k hgrgugi gu k²v gn/
 tcdn> ctd eleqo c²u| ulgrngv gn²4¾p²0 X^allqp o gn km
 j c rpf» go dgtpgm cf cvqw o gi gi { gtgf o²p{gu ²rgv
 uq^ap. j qi { o kpf gp u| go ²n{gugp vcr cu| vcrv hgtf gu²/
 i gvgn²4¾j gugpA

C nku O wu| vcl^ac| qpdcp o kpf gp »uf k²i c gmg/
 p²tg ku pci {qp u| gtgwg ²fgucp{l^av0 G| v u| kpv g hg/

ngungi gu ku o qpfcpk0 Fg c|²tv o²i ku xk¹i qucp n¹we
n¹u dd cp{lc gro ctef qw^ai^a0¹i { ¶ t>rc n¹u dd<

ô | fgucp{^ao jkw c| qndcp c| grxgnldgp²u vt/
f¶ek»ndcp. co gn(gndgp hgrp w0 Xcn»u^ai i cn eu¹pi^{3/4}v
telwn0 Gi²u| r¹p{²pgm crrlc c eugpf gu²u r¹i { xcn/
r¹uqu^ai xqn0 G| v c xcn¹uqu^ai qv ugo o k ugo t^a| m>f/
wvj cwc o gi 0

| fgucr l^at>nc| qpdcp ¶ { ¶<

ô Cv^ao u| cdcfi qpf qmuf» xqn0 J cv¹tq| qw
j ¶xg xqnc p{wi ct>ndg^atco n» gu o²npgm00

Kgp= w¹p²rrgp c rkdgt^arku²fgucrc²u c| »nq/
|gtxcv¶k²fgucp{c gngp^vvg ngnj gwg nqt^ap²rgvtg c
hcven O wu| w¹dcp c i qpf qmuf^aw0 C i qpf qmuf^auv
c|²txgm o²trgi gr¹u²v²u c| ki c| r¹i ngtgu²u²0 C
u| ng nkukÀ nqt^vtuckv uqnu| qt o gi rgr vg nqt^av
o gi j c| w¹qn» n¹tf²ugkxgn< w¹p o ci c ugo w¹w.
j qi { c| qf c j c| c. u| Ångk j^an»u| qd^al^ad>n^aveugpf Ån
xk¹i p²| gk xk^vm j cpi hqu| r¹p{ck ngnw²m dgppg²rgv
tg c M¹w²i gv ô o kpf gp go dgtk w¹pknet^au o q| i c/
w¹l^a0 C|²fgucrc uqnev²iv²u uqnev r¹vq w0 O gi²tv
uqm euqf^arcvqu x^anq|^auv²u o gi²tv o kpf gppgm c|
gngpni| l²v ku0 C n¹w²i qw j qpqn Crk Tk^adcp ku
c vpi gtrctk u|²n u|^apvqwc. tgf u. f qo dqtÀ j qo /
rqnc o^{3/4}3/4w0 G| v c|^{3/4}3/4m¹ f qri q| » ci { cv^{3/4}3/4n¹ng
v ng hc0 Vcn¹p c|²tv ku u|gtgw²m gi {o^auv qn{ pc/.
i {>p crc²u hc0

00 C| crc emqtkdcp c| qpdcp o^at kf u go dgt
²u dgvgi gu0 O^al²u u| ¶kd^apvcm ck xcpncn0 Rgtu| g n¹/
u p l^{3/4}vgm t^a c dcl r¹p{gi²tg c u| crppknk qtxquqn0 C
dgvgi gungf go dgt grj cp{ci qnc c| Ångv²v ku dgvgi /
u²i²dgp= c hc rgf ki l»^atw U crppknkdgp< u| kpv nk^a /
t>rci gl vj cu| p^ar^am²r ¶²utg c u| gi²p{ go dgtgn0

CrkTk c h²n²xkdvgi gungf²u w¹p o gi j cn0

C i {^au| u|^{3/4}p{ . hrgl vj gvgvgp go r¹ngk o²n(gp
dgx²u fpgm c| ko o^at nku rgi²pp{²ugtf Ån O wu| w¹hc
ngm¹dg0 Crlc nqrqtu>lc. c vgo gv²u. c uqm kf gi gp
go dgt. c h^{3/4}f vqo rc f Åd^{3/4}i²ug c|^atqndcp. u| kpv
j >pcrqntc ngmk dgvgi i² vgw²n0 \ wdgkfc J cpwo r¹v

vc. jqi { c| gn¹txwv j^a| dcp o quv pkpeu o kv ngtgu/
pk¹0 C xcn¹uqu cuu| qp{ gi {²dn¹pv c i {^au| »^ta kdcp
gt u xqrv ²u o ci cu¹i qndcp v»pqn»= c M²w²i nku
j¹kg. Owu| vhc o quv vcn¹mu| qw ²rv²dgp gn u| ³/₄ c|
Kv¹gpj kv o kpf gpv gn³/t gtgl²xgr¹ V¹kqndcp kki {gng
²f gucp{¹a v ²u n¹ugt u| go tgi^ap{^auqnev vgw o ci cō
pc¹m c dgpugl²dgp f¹Av n¹w²i gn¹t¹v¹ X¹llqp pgo d /
p |³/₄w/g Cncj gmgp. co knut c| v n¹tf gl v¹g cpp{ku| qt
³/₄po ci^a»n¹ šngm/g pgn¹go gl gngv c x²i gn¹vj cvcvcp
Mqt^ap/u| wt^anev n¹k¹Art n dgcwpwpqo Aō Pgo c|²tv
d¹Av¹vg o quv Cncj A

C| ³/₄px^af ²u c i {gto gm¹rgnpgm gl c| gzegu| ¹k
^amcr qvc c| qpdc pgo vctvqw uq¹ki 0 C| Āl n¹4p{g/
|gv. c| kf . c per u¹v²u. c v¹to²u| gv. rcuucp jgn¹t¹g/
|³/₄m¹gpvgw² c| gi²u| u²i gu h¹cvn h¹A n¹mk gi {g¹pu¹/
n¹a v¹0

U| cm¹pk¹kv n j^atqo »^ta p{kc. cp{lc h¹x²t²p²n
l>n ²tg| v¹g o ci^av Owu| vhc¹ Mku hcnuk o clqt xqrv gl
c j^a|. jqi |^a p²j^ap{ j qn¹ u^apv». ngeun¹m lwj qm gi {
r^at n>0 C n¹pi cuu| c/k o clqtu¹i dcp pgo xqrv kf d¹Av/
rcn¹f^aut^c ²u i qpf qm¹f^aut^c0 J qn c rkd^anev ngn¹gw
gv¹pk j qn c ngeun¹np¹gn¹ |³/₄f u²i gv u| gf pl¹0 M¹v o ct/
n¹qu nku n¹|. o kv Owu| vhf². pgo o ctef j cvqw v²v
rv¹0 \ vdgk c J cpwo gu²pn¹pv ³/₄au| g¹Av h¹x²t²xgn
c| Āppgr²n¹gu nku rcn¹u| qd^adcp ²u o gi dgu²n²m c
i c| fcu¹i fqi cks¹0 C u| cm¹pk¹kk j^a| cv rgl^at¹m ²u c
hcvgr¹ ku o gi u| p¹0 C| ³/₄xgi { gu²pn¹pv d^av{¹a xcn
v¹txg| i gw¹ c l³/₄ v¹0 C xk¹i t>n ki c| u¹i t>n ²rv¹gn¹m
t n kv pgo uqm u| » gugw¹0 C| ³/₄xgi {gv ²u h¹x²t²v gl
pgo pci {qp ²tf gngng¹0 C nkurgi²p{. jc gu²pn¹pv qw
Av c u| qd^adcp. c rct^a| u o gm¹gw p²jc o gi ngr xg n¹t/
f gl v¹g ³/₄po ci^a»n¹ o k¹tv ku qn¹cp kf gi gp pgnk pci {/
d^av{lc ²u cp{lc dgu²ni gv²ugA

Vk¹gp¹ngw¹fm ²x²v vcr quc gm¹ut o^at Owu| vhc¹0
Mqt^ap ²tgw nku h¹thk² ²u ³/₄p²t| gv¹go dgtt²0 O kp/
f gp i {gto gndgp j cncvcp ki c| u¹i²t| gv rcn¹u| km¹ngi /
v³/₄ddu| ³/₄ c| qpdc p c ucl^av o ci c k^ap{^adcp¹0 Fg c|
ki c|. jqi { co kpgm c| ki c| u¹i^at>n c i {gto gm c o ci c
lcx^atc o gi xcp i { | fxg. cj j q| hgp vngv ku o gi /
u²i {gp¹v u| ¹k>u¹i i cn ²u nkct¹u¹cn wf tci cu| /

nqf p⁰ C nku O wu| vcl^f pcm ku pgo gi {u| gt cnef vcm
 qn{cp rtqd^r o^a k cj qn j^a w² tdgp u| qt wmpcm² tg| v^g
 o ci^a v⁰ C l^a wu| »^v tucm² r r qn{ nqppqM i {gto gnk ki c| /
 u^a i o gi i { | f² ugn^a nqwcm u| go dgp c| cne^t v^c /
 xcn ô c hgrp wgm c| qpdcp ô j^a r c v^{3/4} n^{3/4} m^{3/4} g v^g /
 nkpv^g dgp xcn» dcp nkx² vrgu. pci {u| gt r gf ci » i kck
 grk^g lpgm co gm{ gn c nku h^k dcp ku hgrp w l^r thk^v n^v /
 pcm ô o kpf ki šqn^u qcpō dgu|² n^g m O wu| vcl^f xcr⁰ J c
 O wu| vcl^f pcm pgo xqrv ki c| c. o gi o ci {ct^a | v^m pgnk
 ô j c ki gp. cmnqt gpi gf vgm cne^t v³ pen⁰ G|² tv ku dg/
 eu^Å ng O wu| vcl^c c hgrp wngv l^r k^u vgn^r p^v Uqmen
 u| k^g ugddgp xqrv hgrp wgm n^r 4² dgp. o kpv l^a wu| »^v t/
 uckxcr⁰ P ci {d^a v^l xcn c| qpdcp o² i ugo wfqw 3/4| /
 u| go grgi gf p⁰ C| o kpf ki eucm c o clqt^u i t» n o gi
 c ngeun^r nt n cne^t v xgrg dgu|² nⁱ vpk⁰ O wu| vcl^v r g/
 f ki c ngeun^r m pgo² tf gngn² n⁰

Gi { x^a tcv^r p gugo² p { c| v^p j k vgrp o gi x^a nq| /
 v^c v c h^k gi² u| hgn f² u² v² u l^{3/4} l² v⁰ O^a t» n j qm^r c t c
 qn{cp u² tgrgo² tv^g. co gn{ f^{3/4} pv gp dghqn^a uqnc ô
² xgnp^a v o ci c ugo wf^v c o k^r tv ô lgn^g o² v J gn{ g/
 ugddgp < lgn^g o² v pgo. o gtv c| v o kpf gpnk 3/4³ m^g
 o ci^a xcn j q| | c. uk 3/4³ m² i g i {cp^a p⁰ C lgn^g o r^f /
 p {gi² p x^a nq| v^{pk} Å {ugo rgi gv rgi hgrlgdd dghqn^a /
 uqpk² u gn^g pu^Å n{ q| p⁰ O wu| vcl^v x^a tcv^r p n^r c p^f l c
 vj^a v eucm c^r r v^g to² u| v^g gtgf gk hgn f² u² pgm k^a /
 p {^a dc n^r 4^g Gttg xqrv rgtgf gu| v^{pk} r^c ô šnk⁰ o gvō.
 cj qi { c v^{3/4} n^{3/4} m o qpf l^a n⁰ Xcp gi { qn{cp h^k u| » h^k /
 o vgo c^k nek hgr^h qⁱ ^a u. j qi { c| go dgt i {gto gm^u t c
 ô² t^v ndgp ô v³ / d d. o kpv² r^g v² pgm hgr⁰ Ngi c^r i ddu c
 i {gto gm^u t c^r w v³ / d d² u p {qo qwj ci {» dd lgrgpv /
 u² i gugo² p { v^{3/4} v² pkm o kpf gpnk xgn o kpv c|² r^g v o^a /
 uqf kmhgr^r dgp⁰

J qi { v^{3/4} v² pv O wu| vcl^c uqtuf^{3/4} pv n^r c p^f l c A — i { .
 j qi { O wu| vcl^c xku| cngt^Å v U cm^{pk} nk^g d^g. \ wd^g k^f c J c /
 pwo wi {cpku pgo n^v c j gn{ gupgm j qi { h^k. c| gi { /
 nqt^k eu^a u^a tk n^v q^p c^v u| v wqⁿ l c. c n^r pi cuu| c/ k r^k d^a m
² u 3/4| x² tgm v³ tuc^r i^a dcp hgr^l vug gn c| v c n^g xgugv.
 o kv c H^v k^o c/ O qm^r j km^u r c j qf| u^a l^a » n v^p w⁰ \ w /
 dg^k f c J cpwo cd^d c p c| gi {dgp p {wi c^k cuu| q^p { r^g w.
 j qi { u| qt w^u i^a dcp gi {u| gttg uqmt^u q^u p c v³ o c f v⁰

Gn ngtgug c| qnevc v̂ xqrktqnpqnev. cnkmgf fki eucm
c v̂ xqr̂a i qv. fg pgo c tqnpûa i qvctvq̂a mxgr̂o

Crk Tk̂ c o gi u| qtwn̂ 3/4 xgi {g. o kŵa p gn u| 3/4 ku
rcpi cuu| c/k ĥx²tg p{cnîdc xcttv̂c o ci^av²u nku euc/
n̂ fl^av. o quv. co knqt c u| cmppqnkk j^a| grf^aud>n dg/
hq̂{v rku| vtem o^at tqj co qucp eu^{3/4}mgppk ng| fvgm
rgxgr̂| pk ng| fgw c v̂/4dk pci {u^ao Ì cv{cĥxcn²u u>/
i qtp xgn o gn{km hqi cf p^a dg rgi cnî dd c| gi {km nku
a^atx^avA

U| cmppknkd n lgrgpvng| km ku gi { tqnp̂ 3/4gi p²pk̂
Pgnk eucm mw{^alc²u ukngv cpi »tco ceun̂k xcp̂cn̂
J c c nku O wu| vcĥ xcn>dep qn̂ ctep{qu jclÀ²u ctc/
p{qu xkugmgf²u. o kpv co kn{gppgm \ wdgl̂c²u
ĥx²tg rĝfl^am j^av. Kngp pgnk u| k̂xgugp n̂ vl̂o ÿi { rgi /
cnî dd o kpf l^atv dg ku ngj gv k̂cvpk c u| cmppknkk n̂/4²r/
kunq̂n̂ dĉo

ÿi { ku v̂/4²pk̂n̂ O wu| vcĥ ô nku t^a | »u rctcu| v̂
u| gn̂tgp. ĥkugp ĥqnq| qw. xcucrv tvj^akxcn c| 3/4r̂/
dgp. ô xku| cf^{3/4e}3/4 i {gto gm̂qtc u| k̂pj gn̂²tĝo C
pci {p²pk gi {2dn̂pv v̂/n̂rgvugp qn̂{cp. o kpv c t²| /
a^amx^ap{^ap ŵit^an̂ » rrci^al. fg go gmgw ki gp ngf xgu
2u l> vgtgo v̂ûo —i {n̂vu| km O wu| vcĥ kw l>n hqi lc
o ci^av²tg| pk̂o

C i {gto gm̂ gn̂²t²ug tknîp u| qn̂q̂w eucpk̂o | u
O wu| vcĥ v̂p{rgi l>n ku²tg| vg o ci^av c| 3/4gi cu| /
u| qp{p^an̂o Uqj c pgo ku o gpv xqpc v̂n̂p gn U| cm̂/
pk̂kd n j c. r^at jcxk kunq̂n̂ dcl^at^au ŵp. J cĥ| vcp^at
À. co c u|²i {gpvrl̂gu fqi qvpgo eugrgm̂| kxgr̂o

C| šÀ ĥk̂ō gr̂k̂pvg pgo uqm dclv qn̂q| qw c u| c/
mpknkk gi {gngp n̂/4²r kunq̂n̂ dcp̂o Co knqt c| wf̂xctqp
c nku eugpi o gi u| »rcv²u c ĥg| gu. rcr weuqu nku
v̂/4³n̂/4m dg>fŵncm c nqr^at²u u| gi²p{gu n̂/4²r/
kunq̂rc v̂p̂vto gkd̂g. O wu| vcĥ o kpf ki gn̂u pgm Æ̂v ng
c j gn̂²tg²u o kpf ki v̂u| v̂p. r qec p²m̂n̂ u|²r nen̂/
rki tcl̂k̂ŵu k̂^aûcn wf̂v dgo ŵcvpk c vcp^at Àpĉm
fqi q| cvĥ| ĝv̂o C| ctd²u v̂/4³m p{gr̂k̂vcp̂p n̂k̂n̂
v̂/4²p̂gm̂ gv. u|^ao v̂pv. ĥ/4f̂tcl̂v v̂cpŵncm c| gn̂
qu| v̂n̂q̂n̂dcp̂o

J chk vcp^at À. gl c d t|gn²u. wtd^apqu l²thkÀ
 c|qpdc²u|tgxgwg. jqi { O wu|vchc pgo eucm l>n
 hrgn jcpgo ³/₄p²t|gvu ²u t^avctk ku. jc gi {u|gt/
 gi {u|gt xcrc^o k^tv t^ar k^t|cp^on^o C h^kÀ ²t|²ngp{ ²u
 dgn²r|gn^o J chk. c ³/₄³/₄m i {>i {r g^fci >i wu. v^op c|v
 n²r|gn^g o ci^at>n jqi { h^k g^vu²pgm tglvgw e²rc c|. jqi {
 vcp^o|x^ap{ck lgn^go ²d n c| ³/₄pwf cyp^om o²i c
 j cr^ap{cdd u|kn^al^av ku nk³/₄lg ô c| ³/₄p²t|gv pgo kn^okm
 c rt>l²vc j h^kckj q|0 Ngi ngx²udd² c nku kun^oif^ouhk^oÀ
 j q|0 J chk g x²ngo ²p{g o gt dgp gmgp^ongl gw ³/₄u|gu
 vcp^at^vtuck hrg^oh^oi^au^axcr^o C ³/₄³/₄m u|gtgk dgeu^oÀrk c
 i {gto gngv ²u pgo d^apvc^o J chk. c u|cnpk^okk i ³/₄³/₄
²u šhtgpn^ok^o n³/₄p{g|gvdgp. Ài {n^owu|km ²rrgp c p^af/
 r^are^av n^ovc gnu uqtdcp^a wggp^f pgm c p{wi c^k ek^k/
 rk^aek^od>n^o Tgi i gngp^on^opv vj^av dqwc^o hrg^oh^oi {xg/
 ng| xg lgrgpvo gi c vcp^o|^vuq^o0

Gl c J chk /l²rg dqv p{wi qf vcp dngt^oÀj gpg c
 nupucv^ov^or qn^ok Gu|nk^oU|gt^aldgk ³/₄v²pgm k O À
 |gwo dc^o O gtv gppgm c dqvc^om n³/₄u|³/₄pj gv. jqi { gi {
 n^o|cf>j cl^orp^o>u^ai À i {gto gm ô xc^odcp n^o|cf>x^a ku
 pgxgn f³/₄0

C| gi {km f²ngn w³/₄p xgtgng^f²u ngrgvngl gw c|
 kun^oq^owf xctq^o0 C| gt u n^opi gul i c|fc/i {gtgm
 O wu|vchc. dk qp{ l>n >f cngpv xcrc^o gn|km x^atqk
 h^kÀpc^om cnk gn| n^oi pgn^ok^ao cf v c n^ov ³/₄n^ofxgr^o U|g/
 tgpeu²vgpu²i Àntg ²rrgp cmu^ot n^orgw nk c n^orw^op
 J chk vcp^at À ²u tgo gi cln^omen nk^anqwc c u|²v
 wi t>xgtgng^f npgn^oc

ô O clf qfcdgpp u^a o qnwpn[#]

C| ^vp u^a o qn^oem ku^o | rrgp O wu|vchc j À v^o nk
 c n^owk^o0 K^v c n^oilqdd cm^ono gppgm c| cn^otcvqu.
³/₄f³/₄ u|go ³/₄f³/₄m h^kÀpc^om x²i n^oi ng³/₄pkc u|ctx^a 0

C| gi ²u| qu^o ^vn^ov ngo ²p{gp gn xgwg ²u o gi /
 fqi^anc^o C dqul À xcuci l^av c|qpdc^o O wu|vchc
 j À v^o nk^o J chk vcp^at À nk^olgrgpvgw. jqi { o quv r²n^o/
 f^av hqi o wcvp^o0 Gl c dgn²r|gn^o i ct^a|fc h^on^owuk xg/
 tgn^of ô O wu|vchc gn u|³/₄ xgw t²u|v xgtgng^f²udgp
 ô o gi hqi lc n^orpko ²n> d^oÀpv²u² 0

O wu|vchc gn| n^oi ku o kpf gpper qw n^ovc J chk
 ng|²dgp c dqv^o0 F g c|v j kvg< gl eucm qn^ocp^atw^orp.

v̄tn̄r̄o wqi cw» lgn̄r̄. eucm c jcv̄m̄o lgn̄²p{g.
 o kp̄v cñt̄ c| go gn̄²p{ J ch̄k̄ u|²nḡ cr̄w. xci { c
 M̄qt̄^ap/o qpf̄cv̄m̄ c h̄m̄p̄0 O wu| v̄h̄^fv c| gn̄ w uqj c ugp/
 nk̄p̄go ã^{3/4}w̄g o gi 0

O wu| v̄h̄c̄ gn̄j cv̄^atq| v̄c. j qi { c u|²i {gp̄v p̄go
 gpi gf̄ko gi xcn̄»w̄p̄k̄0

Fg J ch̄k̄ gt̄ ugdd̄ xqn̄0 C x²t̄gut̄ḡ n̄eto q̄n̄v̄ nḡl̄
 v̄p̄^at̄ x²i ã̄n̄ kū q̄w̄ euc̄r̄ n̄j̄f̄ v̄c O wu| v̄h̄c̄ r̄f̄ du|^at̄^av̄. c̄j̄ q̄n̄
²t̄vḡ0C v̄p̄^at̄ ã̄ kū q̄t̄f̄ q̄w̄. O wu| v̄h̄c̄ kū0

J ch̄k̄ r̄gf̄kī gi {tḡ t̄^apīc̄w̄c̄ c̄ h̄k̄^ã euw̄m̄>l̄^av̄. j qi {
 c̄ n̄et̄lc̄ ō cl̄f̄ n̄ku| c̄n̄ef̄ v̄0 O wu| v̄h̄c̄ gn̄ u|^{3/4} c̄ u|²i {gp̄v
²t̄ḡ|v̄g. c| k̄īc̄m̄ cv̄. c̄ šō gī v̄⁴v̄²p̄j̄ ḡv̄ḡp̄v̄ō̄ ô̄ c|/
 w̄^ap̄²t̄ḡ|v̄g c̄ h̄^fl̄f̄c̄m̄ cv̄ kū ô̄²t̄ḡ|v̄g c̄ r̄wu| v̄c̄ gt̄ u|c̄/
 n̄j̄v̄. j qi { gi { h̄gp̄ w̄ v̄gn̄k̄p̄^{v̄}n̄{gū go dgt̄ xku| c̄²n̄ c|
 gt̄ḡ²xgn̄0 Fg O wu| v̄h̄^fv c| j̄q| v̄c̄ nk̄ x²ī r̄gī c̄ uqf̄t̄^ad̄>n̄
 j̄qi { c̄ h̄k̄ k̄n̄ek̄ h̄^fl̄f̄c̄m̄ō gi {u|gt̄ gp̄ ã̄t̄^a r̄gw̄ t̄cl̄v̄
²ū d̄īpl̄ḡ n̄gn̄gw̄. ō kp̄v̄ gi { r̄>n̄^audc̄^ap̄cn̄0 M̄gūgt̄
 i { r̄⁴gv̄ r̄gw̄ ō quv̄ ã̄t̄^a t̄cl̄v̄ ō kp̄f̄ gp̄ k̄^ap̄v̄. cō k̄ h̄⁴z̄/
 p{gū²ū h̄^{3/4}ã̄w̄ḡ^am̄>0 J ch̄k̄ n̄^{v̄} h̄ḡll̄gn̄ ō cī cuc̄dd̄ xq̄n̄
 p̄^arc̄. n̄et̄lc̄ r̄gf̄kī q̄n̄{cp̄ xc̄ucī. ō kp̄v̄ O wu| v̄h̄c̄ h̄gn̄ /
 eqō d̄lc̄0 G| ḡm̄gp̄ p̄gō r̄gj̄ ḡv̄w̄ v̄gp̄pk̄ ô̄²ū v̄c̄f̄ p̄²rr̄gp̄
 ḡ²t̄vd̄ ī^{3/4}w̄O wu| v̄h̄c̄0

Cō kn̄qt̄ c̄ f̄w̄cn̄j̄f̄^aup̄cm̄ ô̄ ōgt̄v̄ k̄p̄n̄f̄dd̄ ḡpp̄gm̄
 r̄nj̄ ḡv̄w̄ p̄gx̄ḡ|pk̄ c|²r̄ ã̄r̄gv̄gū l̄gr̄gp̄ḡv̄v̄ ô̄ x²ī ḡ xq̄n̄0
 J ch̄k̄ q̄w̄^an̄j̄w̄ t̄gō gī xḡ²ū f̄ã̄j̄^{3/4}v̄gp̄ c̄ f̄q̄dq̄ī>p̄0
 O wu| v̄h̄c̄ r̄gf̄kī ō quv̄ ō^at̄ p̄gō u|>n̄v̄ gi { u|>v̄ ugō 0
 Ū^{f̄}^auc̄ kū c̄dd̄cō c̄t̄cf̄ v̄0 Xku| cō gp̄v̄ c̄ j̄gn̄²t̄ḡ²ū r̄ḡã̄n̄0
 Ū²r̄gp̄. p{w̄ī q̄f̄ v̄p̄ ō gī x^at̄v̄c̄. ō q̄ī c| >t̄^ap̄cm̄ x²ī ḡ
 r̄gw̄. c|^{v̄}p̄^{3/4}u| ḡeuqō cī q̄nc̄ n̄³p̄{xḡk̄v̄. h̄ã̄ ḡv̄ḡk̄0 U|ḡ/
 o²d̄ḡ p{qō v̄c̄ n̄ku. ^{3/4}u| gi { t̄ f̄^{3/4}w̄ r̄k̄t̄qū h̄ḡ|²v̄. p̄gō
 p²|ḡw̄ uḡ l̄q̄dd̄tc̄. uḡ d̄erc̄ ô̄²ū ō kp̄v̄ gi { c̄n̄k̄l̄^at̄>
 ô̄. j̄c|ch̄ḡr̄² xḡw̄ḡ ã̄l̄^av̄0 Qw̄j̄q̄p̄ c|^{v̄}p̄ q̄f̄c̄^an̄v̄ pci {/
 p²pl̄ḡ ḡr̄²ūc| vō q̄pf̄ v̄c<

ô̄ | p̄ r̄gf̄kī p̄gō ō gi {gm̄ v̄³d̄d̄² xku| c̄ c| kun̄q̄/
 r̄f̄dc̄0 Vw̄f̄qō. j̄qi { kv̄ p̄k̄p̄eū ō^aū n̄⁴z̄²r̄kun̄q̄rc̄0
 Nḡu|. cō k̄ r̄gu| 0 U|v̄cō d̄w̄rd̄c̄ ō gi {gm̄ c̄ n̄ev̄q̄p̄cv̄ku| v̄gm̄
 kun̄q̄r̄l̄^adc̄. j̄qi {²p̄ kū v̄ku| v̄ r̄gi {gm̄ n̄⁴u|³/pī gūgp̄gm̄
 p̄gn̄gō c| gō d̄gt̄gm̄c| w̄e^ap̄²ū ugp̄nk̄ v̄³d̄d̄² ō gī p̄ḡ ã̄v̄/
 j̄ gūgp̄0

! u ¶ { ku v̄4v̄2p0 O wu| vhc. o kpf gp u| Ān k 2u
tqnqpk ft^a o ck gmgpngl² uugn fceqrkc. cw»n c per »n
hji xc pgo vgwg v̄4d² n̄d^a v c u| crqpkkk kunqñ dc0
C| kunqñ dc. cj qnc pci { u|² i { gp² tv̄g0

C n̄ / cf » r gf ki ukngt gup o gi u| Ārgv̄g0

KKOC X^{3/4}U U wn^a p h x^a t quc0

00 Mqpuv̄p^a rqn̄. co gn̄ o quv o^a t go dgt/
3/4v p^a v O wu| vhc o n̄4² u² pgm u| ¶pj gn̄ g rgu|. m̄4³p.
3/4po ci^{a2} tv² n xkñ i 0 | n r̄ngñ km xcn̄ u^a i qu o knq/
m̄| o qu| c c pci { xkñ i pcn̄0 G| gt² u g| gt² xp { k go /
dgtk h̄gn f² u. euq^a r̄vqu. r qp̄vqu ngtgu| vo gw| v̄g0
Mqpuv̄p^a rqn̄ dcp v̄ñ m̄| km Gwt»rc f | uk² xer0 —
xkñ i p { ¶v o gi kw c xk² nk h̄c v̄rgo dgt u|^a o^a tc0
Cnk Mqpuv̄p^a rqn̄ v pgo kuo gtk c| V^{3/4}3/4m̄tu|^a i qv
ugo kuo gtj gv̄0 K̄v u| ¶k̄v o ci^a dc V^{3/4}3/4m̄tu|^a i n̄ /
u ddk^a m̄co h lg c| qn̄v c v̄4v̄2 p̄rgo h̄to^a n̄ gu| o² /
ngv. o gn̄ gngv U crqpkkdgp uqj cugo n̄ v̄j cv̄w xqpc
o gi² u co gn̄ gn̄j g| c| gt v² u 3/4| v̄p|² uv V^{3/4}3/4m̄t/
u|^a i o Ān^a d»n pgo wqn̄» uqtdcp r gf ki n̄qpuv̄p^k
p^a rqn̄ k̄v̄r̄c u| v̄r̄v̄kd»n̄x̄gw̄0

Co k̄v̄c c v̄4v̄2 p̄rgo k xkñ i n̄k̄r̄m̄w̄. kw. c| 3/4| /
u| gp { Ān̄ n̄ v̄ h̄4f p { gn̄ n̄4^{3/4} v̄ ô cj qn̄ r̄gi n̄4 ḡgd
2 t̄p̄v̄ngl km c n̄ v̄ xkñ i t² u|. Gwt»rc² u f | uk.
ô jcl»| pcm^a v c Dqu| rqtwu| qp c v̄pi gt¹ t»
jcl»n̄0 K̄v xku|^a v c| Āv Chtkn̄ dc. Gi { k̄v̄qo /
dc ku0 Dk̄^a pe. c o ck Mqpuv̄p^a rqn̄. o^a t Miku| /
wu w̄t̄w̄m u| Ārgv̄² ug gn̄ w j^a tqo u|^a |² xxgn kw^a m̄q̄v0
F^a tkw² u Zgtzgu ugtgi gk g| gp c ngungp { h̄4f p { gn̄
xgp ngtgu| v̄Ān v̄4v̄gm dg Gwt»r^a dc0 M̄^u dd Pci {
U^a pfqt eucrv̄ck cf¹ a m xku| c c n̄ v̄qi cv̄^a uv̄= m xk̄
u| qp̄v Gwt»r^a d»n f | uk^a dc o gppgm² u qw r̄wu| v̄| pcn̄0
O wu| vhc. c nku n̄v̄p̄ckunqñ u n̄f gw. uk v̄4v̄2 /
p̄rgo k r̄x̄gi v u| ¶k̄j cv̄w c u| v̄co d̄wk eu^a u|^a tk v̄ku| v̄k
kunq̄r̄ h̄r̄ckn̄4^{3/4}0

Gwt»r^a dc uk^a m »c j^a tqo jgn̄ gp r̄gj v̄gw dg/
v̄4pk̄ Q̄tqu| qu|^a i qp. c I k̄d̄cn̄^a tqp^a v² u c Dqu| /
rqtwu| p^a n̄0 C p { vīck m̄w̄Ā^a v g| gp c j^a tqo n̄r̄v̄p

ngtgul vĀn nĭu²tgng o gi Mgrv o gi j »f ĩcpk0 C nĭ4²r/
 qtqu| xkf²ngp o^at c v³4^vpgngo gn wk kf ndgp »tk^auk >/
 p²rx^apfqtr^auqm²u j cteqm fĀncn0 C wv³t/o qpi qn^a
 w^apk p²ru|crqtqf^au Mĭpc gr² rt>d^anc dgp{qo pk c
 ulqtĭ» ngtgvngv0 Mĭpc eu^au^atc c|qpdep c dg^v3/4^m
 gmgp hcrv go gm. r^atcvcp. j gi {k gt fĭo²p{rĭpeq0
 C nĭ4²u xku|crvcpv²u o quv o^at Qtqu|qtu^ai k^a/
 p{^adcp rt>d^anv f|ukc j w^ao|cpk0 J qi { ukngttgn c|v
 pgo eucm c jwpqm »c rghqn« dg^v3/4²ugnd n fg c|
 qtqu| rĭgm^ao qf q| » ngrvku²i²d nku^aj cvlvn0

C o^auqf km ner w I ktcn^at. gl c Dqu|rqtwu|j q|
 j cuqpn» h³4f p{grx/vrĭm q|^au0 J qi { c| ctdqm²u
 o »tqm eucm gi {ulgt²u eucm Hĭcpekqtu^ai ki wf^vm
 grlwpc gppgm qnc. j qi { c| chtknek rcmu^ai |3/0²v
 vj^av c rĭ4m gtgl²v c vġpi gtrctk rcmq^w t²u|gm^v n c
 Ucjctc x^arcu|vc gr0[~]i { pgo wf< gt v nkhlv^gpk=
 go dg^tgl gtxq^atl^a»n gn xcp x^arcu|xc0 G| c rgi ng/
 x²ud² xgu²n{gu dg^v3/4²uk rqp^v c dcd^atu^ai u^ao^atc0
 C jcto c fkm j gn{ c Dqu|rqtwu|0 G| o c c eu^a/
 u^at. K0 Cdfvn J co kf u²nj gn{g0 C t>o ck kf ndgp
 gl gnp^gm c h³4f p{grxgm vrĭm q| »j gn²p²r Āv Dk/
 |^ape=g| c x^atqu n^a|cfv hgn Ugr vko wu Ugxgtwu
 gmgp0 C xcu²i k km c|v³p v³4d²xgu qutqo w^ap
 grh^ai rcm^am²u 3; 8/dcp Mtku|wu w^ap h³4f ki tqo/
 dq^an0 552/dcp Pci { Mqpu^vcvk dg^vg^ul g^tgv^v
 c r^atcvcp hgnx²u. tqo qndcp jgxgt xk^ai x^a/
 tqdc²u dktqfcm c u²nj gn{²Ān lgr³4ng nk c
 j clfcp fleu u²i gu. cmqtte o^at rqtcdqo qw Dk^ap/
 eq0 ô šPqxc/Tqo cō ô gl rgw xqpc Dk^ape Ā
 pgxg ô c|qpdep eucm Mqpu^vcvk w>fck crw²tv^g
 gn u v o wnc hgnĀn t²i k pci {u^ai Ā0 Co knqt K0 Vj gq/
 f>|kwu eu^au^at hgnq|vqc hck nĭ4^v c dktqfcm^av²u
 o kpf gpv Ātc grt^gpf gl vgm c x^atqu c pci { eu^au^att>n
 c Eqpu^vcvk cr qku. Mqpu^vcvk x^atquc pgxgv p{gtv^g
²u c ngrgt>o ck dktqfcm^o u²nx^atquc rgw0 Xk²|
 Dgrk^at uqmu|qt o gi²pgngv u|gtgr r²ug gukm gttg c
 u^a|cftc0 J cto kpegi {glgt go dg^tp²n v³4ddg^v j^ap{c/
 vqw netf²rtg c| co hvg^atwo dgrk n^a|cf>m nĭ4 Ār0 | u
 o²i o lgn w grkpf wp^apcm c|^aulck jcfcm c p²rgm
 x^apfqtr^au^atc. v³4p³4m Lw|v³4pk²pwu. c| go dgt. c

ul cdcfi qpf qmqf». c $\sqrt[3]{4x^2}p\{cmq\}$. hgr^r r[¶] k c J ci lc
 Uqrj k^v c U gpv D^{3/4}εug²i vgo r^{no} a^v co gn{dg c
 ngtgul $\sqrt[2]{p}\{xk^i$. h n^r r c| qtqul ²u c i $\sqrt[3]{4}\sqrt[3]{4}$. ul^a | c/
 f qmqp a^v c| »v c ku xku| cx^a i {kn0 C xcp^a r^m m dqⁱ a/
 tqm o ci {ctqm j wpqm cxtqm nkr^{gpe} cm^{er} o o cn ku
 o gi r t»d^a r^{pc} m Dk^a pedc dg^v $\sqrt[4]{4}pk0$ Co k Dwⁱ qi^a p{qu
 Dqv^{pf} p^{cm} pgo uln^{gt} $\tilde{A}r$. c| v vⁱ p 3425/dcp c xg/
 r^{pegk} fqi². Fcp^f qm J gpt^{km} gr^t v^{g0} P go uqⁿ t^c ng/
 t^{gul} v^{gu} m^{xci} qm $\tilde{A}r$ $\sqrt[4]{4}v$ m v^p {a^v c p^{er} u $\tilde{A}r$ $\sqrt[4]{4}v$ f qo d^q/
 m^{p0} Eucm n^r v go d^{gt} $\sqrt[4]{4}v$ o $\tilde{A}r$ c x^{gk} nk R^{er} g^{qm} i
 O k^a n^f c| š^k f^{gi} gp n^{gt} gul $\sqrt[2]{p}\{gng\sqrt[2]{o}$ ²u aⁿ ¶^{lc} xku| c
 c d^k a^{pek} me^u a^{tu} i^a v0

M $\sqrt[4]{4}$ dgp c| q^p d^{cp0} r^a t^j wⁱ co qu^{cp} c n^{gt} gul $\sqrt[2]{/}$
 p{gn^p gm c n^{gt} gul $\sqrt[2]{p}\{gmn gn x[¶] k^{qw}. $\sqrt[3]{4}\sqrt[3]{4}$ m^{tc} i km^{wo} \tilde{A} ²u
 uq^j c^{ugo} x² i| f j^{cte} a^x cⁿ o^a u. o² i uq^m m^{en} x^{gul} g/
 f^{gr} o g^{ugdd} g^{ngp} u² i ku $\sqrt[2]{o}$ c^f c š^X a^{tu} q^u o. c š^X kⁱ i^o
 g^{ngp0} C| a| ul^{ck} ul g^r f| u^{wn} q^m gi {n^{qt} k j d² t^g u^{gk} c|
 q| o c^p r^{km} g| gn0 O wⁱ v^{ch} c n^{ef} g^w x² t^u | g^{tk} p^k u^{gk0} C
 n^t »p^{kn} c ul g^{tk} p. ² r^r qⁿ { n^r n^u | go gm² u ul n^g j cⁱ \tilde{A} c^m
 x^q n^{cm} h^{gl} g^f g^{ro} g^{km} o k^{pv} o c i c O wⁱ v^{ch} c c ul c^{mp} k^{nk}
 n^{ef} g^{w0} M^u d^{dk} n^{gx} g^t f² u \tilde{A} m c d^k a^{pek} m^{en} ul go d^g/
 $\sqrt[3]{4}$ n < j c^u l p^a r^v q^{ucdd} ul c^x c^{km} n $\sqrt[4]{4}$ $\sqrt[4]{4}v$ u^{qm} x^{kug} r^k c d^k
 | a^{pek} l^{ng} i g^{v0} U l^{co} d^{wn} š^g k^u v^j ² p R^q r^{ku} o o š^c X^a/
 t^{qu} d^c o C| g^h h^g p^f k ul »< i { $\sqrt[3]{4}$ n^{tg} c| š^c w^j g^p v^{gu} o o
 š^v g^{nk} p^v n^f g^u o. c| v^{tem} c^m n^{tk} o gi ul »r[¶] u^{c0} J kⁱ
 ul g^p o k ku š^{ku} v^{gr} t^r o. š^{pc} i {uⁱ t» r^o. š^o ² n» //
 uⁱ t» r^o d^{gu} ² n \tilde{A} p^m j^c x^{er} n^{kv} o gi ul »r[¶] u^{de} p
 v^{ku} v^g r^k c^{net} w^p n0 C| \tilde{A} c^{dd} i $\sqrt[3]{4}\sqrt[3]{4}$ dgp c š^v j^o ul kⁱ
 u^{gi} j^c pⁱ q^v n^{er} q^{w0} C^v ² p^v o c ku C^{hu} ² p^{pg} m
 o q^{pf} l^c c i $\sqrt[3]{4}\sqrt[3]{4}$ p{g^{rk} g j^{gi} {² v h^{gn} h^q i u^{qt} a^j q|
² t^{kp} x^{g0} i { n^{gu} | c| c^w j^{gp} v^u | d n ku c^w h^u | g^p v^u .
 o c^{lf}. o² i gi {ul g^t d^{dg}. o gi n^{qr} q^w d^{dd} c^p. r^t k^o k[¶]
 p^g j² | p{g^{rk} d^{ctd} a^{tqm} ul^a o^a t^c g^h h^g p^f k0$

M^{km} g| gm c| q| o c^p r^{km} \tilde{A} M^q p^u c^p v^{kp} a^r qⁿ { o c^k
 v^{tk} c^k c $\sqrt[3]{4}\sqrt[3]{4}$ m² i u^{gk} \tilde{A}

Ⓞ J c ul go dgp Dk^a p^{ee} cⁿ c v \tilde{A} n» r^{ct} v^q. c n^{ku}/
 a| ul^{ck} l^r n^u | kⁱ g^{vp} gi {g^p g^{ug} p^d g^h r^j c^r f^w pⁿ #^g r^t //
 n^g | \tilde{A} p^m c| gi {n^{qt} qⁿ { j^c v^{cm} c^u. d ul g^p x^{gt} g^{ng} f »u
 j »f[¶]». c n^{qt} c n $\sqrt[4]{4}$ ² rⁿ q^t d^{ep} c| q^p d^{ep} o^a t^t l^r t^{cf} vⁱ
 uⁱ p^{cm} k^{pf} w» U g^r f| u^{wn} | d^{kt} q^f c^{iq} o j q| 0 .. to ² p{/

qtul^a i dcp² n gmnqt gi { o^a ukm nku p²r v³/4g/
 f²m ô gi { c u^a o vrcp n³/4 ã< ô c| qi j w
 v³/4³n³/4n0 C| qilwt p²reucn³fd>n c n³pcck eu^a u^a tv ku
 cf>hk gv² utg n³p { u| gt v gi { nqt k pci { p²rd n u^a t/
 o c| vcn0 U^a o wm eugn³n xqrv F| ukpi ku n³p pci {
 j cf l^a tvck crw v pvgm hgn0 Gn dd c j cvrn cu u| grf/
 | uwnqmpcm u| qn^a k o clf hgi { xgt v³ tuck c o ck v³/4³/
 n³/4m ugl0 Cto² p^k dcp² n gm gmnqt < c u| grf | uwnqm
 j gn k nqt o^a p { | > k0 Xgt gmf r^a u| vqtp² r g| c hcl. grⁱ
 go r^m xcp t> nwm c Dtkkuj O ã gwo dcp0 Gtvi twn
 pgx xg|² t ãm xg| gwg n³u dd ngv vx^a dd. c v³ tqm
 gn n Mkr^a | uk^a dc. Mqpuvcp^a r qn hgn³0 Gtvi twn h^a v
 Q| o^a ppcm j v³ m ô kppgp c p²r² u c eu^a u| ct/
 j^a | pgxg ku0 C|² c eu^a u^a t². cnkpgm pgx² v O wu| vch
 qw r³ vlc o kpf gp u| cm³ p { x gnu qrf c³ pcm cl^a p³ /
 u^a p0

Eucm Q| o^a p. c f kpcu| vlc p² xcf > ug xgwg hgn c| /
 v³ p c o qj co gf^a p j kgv0 Euqf^a rvqu. ngi gpf^a dc xgu .
 l³/x v r³ v >^a m qm w³ p i c| fci qp p u ã n² u o^a t gi { /
 u| gt / n³ v u| gt^a v ku l³/p Gw> r^a dc0 Hlc. Qtnj^a p o^a t c
 Fctf cpgr^a n^a n xqrv qwj qp0 C| v³ pk ugo wf >. fg o^a t
 pci { j cvrn ã kf ugdd h³ thk o gi ner lc c dk^a pek ng/
 tgu v² p { eu^a u^a t gi { km lgrgp² mgrgp hlcvn r^a p^a v.
 o kxgn c Dc| krg ã u| v o gi ugi v³ gwg eucvckxcn c| gi { km
 ngtgu v² p { gngpu² i gkgngp0

Dk^a pedcp c| v³ p Qtnj^a p r³ vlc. j qi { c eu^a u^a tk
 wf xct ft^a i cn³/xgk jco kucm u c| gi { nqt qn euqf^a rv
 nqtqp^a m ft^a i cn³/xgk nk xcppcm v³/4f grkg0 P go u| > rv
 ugo o kv fg l> n o gi lgi { g| v g o ci^a pcm o kpf g| v² u
 j c| co gp0 | w n ng| fxg c v³/4³/m xg|² tpgm pgo
 ko rqp^a rv. j c ã { xkv² m ngv c| šcwf kgpek^a tco c
 v> pvgto gngp ngtgu v ã n j qi { n³/4 dgp c| ctep {
 qtqu r³ pqm d i vgm² u o o cf ctem eucwqi vcn0 | u
 dg hgn³ o gi o quqn qi v³ m co knqt u| gt vct v³ uqu rgdqo /
 r³ u w³ p hrgo gmgf vgm ô² u c v> p. c x³/4³/u| cpf^a nu.
 o q| f vrcvcp eu^a u^a tten gi { u| gttg pgo xqrv ugj qn0
 L> n wf v³ m j qi { g| c dcd^a tqmpcm u^a pv j cv³ uxf^a /
 u| cv. gi { u| gt euki cu| gtng| ggv lgrgpv co gn c v> p/
 go gr² p { v c pci { | cl dcp² u| tgx² vgp ã n c o gpp { g/
 | gttg go gr² u gn ã pvg0

Qtnj^ap. c o ck eu^au^atj^a| jcto kpecfkm wtcmy/
f>lc. u|gtxg|vg c ngtgu^vp{ i {gto gngnd n c lcpk/
eu^atqnc0 lgpkeugtk cpp{k o kpv A^l ncvp^an0 G|gnvg
dgyw²m neo cu|nqtwnlcp gn n c ncvpcn²u|^v /
i²rdg. c u|kiqt^À hgi {grgo crcw n²u| eucr cvqnj q| ô
c|^vp nk^{3/4}wgm j^awn r^at²x o A^lkc. o kpv c rgi xgu| g/
fgrn guggd. rgi xcm0 gt dd xgtgnf n0

Qtnj^ap Hc. K O w^af *o^at xkugrk c šu|wn^apō
e^ogv ku+ x²ttgnxcuon ctcpp{cn o gi u|gt|k Ftkp^a/
rqn{v²u g|v h x^atqu^ax^a vgu| Kōppgp. c n^{3/4}xgwp m /
|grd n o^at nqo qn{cp hctn^u|go gv p²| Dk^apeecr0
C| ctcpp{cn d^ldqttn f^l|u|gu. gi {o^autc hpgngf
i^{3/4} wcm o gi f^{3/4}ddgpxg p²|pgm^{3/4}u|g< pppgm o quv
o^at hrg ugo v²lc0 Xcn>dep<r^at²x o A^lkc c v^{3/4}n^{3/4}m
cf>vn^{3/4}xgvrgp²mc eu^au^at>0

Ⓜ | u c rgi {^{3/4}pi A^lv ngrvk dktqfcmo j ugrm
eu^au^atc. grkpfwn gwt>rck nqr^lw>A^ltc0 U|gp|^aek>
xgtk hgn u|gtvg c p{wi cvk dktqfcm cm u|²nx^atquck0
C dk^apek eu^au^at gn u|^{3/4} wc| km Gwt>r^adc0 Ngr rgi|gv
rgp. ²j gu n^lk^apeuk^ai hqi cfvc c rgi gpf^au nqr^lw/wcn/
nqr>0 L^at c r^ar^ap^an²u Xgrgpe²dgp0 G| c ngtgungf /
n^{3/4}v²tuc^ai o kpfki o rgi gp²tfgm f^{3/4}v Mergv k^apl0
M^lu dd U|wco dwnlcp^{3/4} rgu| c rgi hqvqucdd²u rgi /
u|gdd n^{3/4}xgw²ik rcmvc0 Gmqtldcp o^at f^Àn^ln ctc/
p{ckdep<r²p|²tv uqm o kpf gptg nerjcw= c| šCtcp{
J qtf^aō. c v^{3/4}n^{3/4}m go dgtv^{3/4}o gi glv ku u^an^lqvc
j cl>p F²nQrcu|qtu^ai d>n^av Gi {kr vqo dc0 G|gnl n
c| wcuqnd>n rgwgm c o co gnwqm u v Gi {kr vqo p²/
o gn{knn²u ddkwcmqf>lc k0

Xgrgpeg²u c v^{3/4}ddk gwt>rck^amco A^lgu n²||gn
gpi gfk m gn c u|gi²p{ dk^apek wc|> eu^au^at0 O kv ku
dgu²n^{3/4}u|g/xku|c. j qi { c v^{3/4}n^{3/4}o clf o²i Dk^apeqv
ku grxgu|kA W|{cp# Ⓜ T²o n³v uqn0 Eucm c r^arc
xli cu|vrlc o²i ku Rergqi qruvc0 O clf eucm rgu| xc/
rj qi { . o kpf gpv o gi vgu|. c o ci c t²u²t r0 M^lpqu.
dqv^ap{qu xk^ai u|gp|^aek< c j cvcm cu qru| pci {/
ngtgungf m c| cf>uqm d^{3/4}v^{3/4}p²dg |^ate^v^am c x²fv/
rgp pci {wcv0 Pci {pgj g|gp u|cdfwn eucm nk qppcp0
X²i tg xku|cn²g^Àn l>h²to^ap gi {gwgp o gi o c/
tefv x^atqu^adc c dc|k^gA^l|0 J c|cl^{3/4}p²u ô o kv xqr

o kv vppkgA ô uko^ap dgj »fqm c v^{3/4}mpgn⁰ C| q| /
 o^ap cmqt¹kdcp o^at U gtdk²ki vgtlgul ngf kn⁰ i { ng/
 t¹Av v^{3/4}m n¹|tg U cmqpkk Owul vhc nef gw ul¹Än /
 x^atquc. ugkpgm rñj gn{g ku⁰ Mk wflc. jqi { ngt¹Ängm
 ugk o gn{km ul w³p n^evq^akn¹pv. gddg c ngtgul v²p{
 v^{3/4}ldu²i x^atqudcA

Mgu¹gt vci knwo rgw gl gndgp c| kf ndgp Dk
 |^apedcp Ät^a0

Ю O w^af w»fc²u Hc. Dclcl kf wi {cpku o^at
 c o ci cu n»t»ndgul²ngl w³p Dk^a peecr⁰

Gmqt x^atcwcp ugi ¹u²i l^{3/4}p⁰ Pgo ku ugi ¹u²i.
 eucm grf^a|^auc c fqñ qnpen⁰ C v^{3/4}v²pggo ngtgn¹/
 pgm hqti^au^av nku² hgnctw|vcvc c uqtu⁰ F|ulpi ku
 m¹p n¹u k w»fc. Vko wt Ngpm Äi { v^{3/4}pntgxgk
 Mku^a|uk^adcp. o clf dcd^at rñxcuj cf vugv¹xgn c H^{3/4}f/
 n¹4 k/vpi gt rctv^aki gn p{qo wxc. c v^{3/4}3/4m ul w¹/
 v²p ugtgi gk. jqi { o ci c c| grñqi qw ul w³p ku
 xcunerkn¹dcp vgl k o gi c| wcv xku| chgr¹ f|uk^adc⁰
 Qw. c n¹p{^{3/4}vgrp t^aeuqm o^{3/4}3/4v rwul wn gn c jc/
 vco cu Dclcl kf⁰ Dk^ape c| qpdc¹ j^adc r¹gn¹km hgn⁰
 C v^{3/4}3/4m d^ao w^evq¹cp t^{3/4}kf kf c¹rw n¹j gxgk c euc/
 r^auv²u Ätc cne¹n¹r gu⁰ | u ¹{ { n¹3/4xgng| gw dg c| c
 xk¹i v^{3/4}v²pgm k pci { gugo²p{. o gn{ c| v²p U gtdk.
 Cn^aplc. Two²rk. Dqu|plc. O ci {ctqtul^ai. Gt²n¹.
 Oqf xc. Qñ j qtul^ai. Mko. I gqti kc. Cpcw¹rk. O gl q/
 r q³o kc. .. to²p{qtul^ai. Eugtn¹gul qtul^ai. Nqtku¹ v²p.
 Gi {kr vqo. Vtk rku|²u Vvpku| o gi j »f¹u^axen Qv
 tcpw». Vctgpw». Dgn t^af. Tj qf qu. Mkt». Dw¹c gn
 gu²xgn U³lgtqtul^ai ki. Ngpi {gnqtul^ai ki vgtlgul vk nk
 c| gi {nqt qñ kuo gtgv¹ nku q| o cprk v^{3/4}|u qtul^ai ck
 pcm jcv¹tck⁰ C| Gw»r^av l^atv gi {nqt k dk^apek eu^a/
 ul^at uctlc. c| wqn» eu^aul^at. c xk²|. h^even Z KO Rcr/
 qñi qu Mqu¹cpv¹ eu^aul^at xgul vk gn jcn¹n¹ki dÄu/
 n¹p. gnul^apvc¹ xci fcmq| xc. 3675 o^alwu 4; /2p. 3/4
 xgpp²i { per k euqf^arvqu qu¹qo w³p. c j Äu/
 p²j^ap{²xgu. xcf KO O qj co gf v^{3/4}3/4m ul w³p ppen ul go /
 dgp Dk^apeqv. o gi o ctc¹v ngtgul v²p{ dktqfcm^aw⁰ C|
 qrcul ugi²f eucr cvqm gro gpgmÄngm= I kuw¹pkcpk o gi /
 ugdguÄn c n¹u p l^{3/4}v r^arck i^an^am r g f ki. c| ²i gn
 gugw x^atqu n¹w³p. xku| chqtf wpcm c o guul g vpi gtgp

²u ulgwxg j c | cgxgl pgn0 C eu^aul^at j qmwgu²v c j »f«
 ul w^ap nkngtugxvk c | we^anev hcrnev dqt«
 j wnc/ j gi { gm n³4 A⁰ D^at uqm v¹ | gl gt gmgp^am» ngtgul²p{v
 o gi ku ³4 c v³4³m eucvf A^j. ki gp uqm dk^apek A^t ²u
 r qn^at^a m o quv o^at O qj co gf ul qn^are^vdc0 U v.
 pgo uqn^atc ul w^apk tgpfgxv dk^aqu¹lc c ngtgul²/
 p{gm ul^ao^atc c ul cdef xcm^aui {cmqtrvq⁰ O²i o c
 ku l>h^qto^ap ul «³4³4 c ul^a| gl tgu Rgtc x^atqut²ul.
 v³4d o^au *nqpuv^apk^arqn{k pgi {gf fgn gi {A^w0 O qj c/
 o gf. c J »f«³. c šU w^ap Hc^v0^a xgu^ak U vco dw^w
²u dktqfcm c ul²nj gn²x² vgu^a k0

i { rgw Mqpuv^apk^arqn{ c v³4³m²i hmggi /
 x^atc0 šU vco dw^w rqpvcup eucm rctu rtq vqv gn/
 pgxgl²u< w^alfpqn²r rrgp eucm c | Ctcp{ul ctxqp k^p/
 ppgk x^atqut²ul v j «¹l^am U vco dw^wpcn0 O wul vhc ne/
 fgwo ci c ku c x^atqu o^a ukmhgr²dgp r^akn0

Mqpuv^apk^arqn{ o ci c uqmen pci {qdd0 C | gw
 t>rck nqpv^apgpu nkp{Aⁿ» eu^aun²p hgm^akn c Hgnv^g/
²u c O^atx^ap{/v^gpi gt n³4 v. c dqu^arqt^wul k v^gpi gtul go
 tqu rctv^ap0 K^g ku nk^avpk c v^ul v^ukn^urc *cd^arn^ad>r0
 U go dgp. c v^gpi gtul qtqu v^an» qrf c^ap. c |^a ulck
 nqpv^apgpu p{A^{kn} c | qpdc^a f qo dqu. j gi {guxk²m.
 nku p{A^{kn}a p^ap o k^pf³4ul g p{q^arexpô nk^gpexgpgl gt
 go dgt r^aq^w gddgp c | k^f dgp0 U nwctk v³4³m^an
 ©ul n^af ct. ul²r nk^av³uv p{A^w» go gmgf²ugngp²r A^w
 pgi {gf. Mqpuv^apk^arqn{j q | vctv^al km²u c ppcm gi {kn
 gn x^atquc0 K^v ng^al f fkm Mku^aul^axen o ci c c v^uqm^ac/
 vqu uxk^ai0 O wul vhc nef gw ku o gi /o gi dqt | qpi qw.
 cj^ap{ul qt^a p²| gw c v^an»^a | ulck qrf c^atc0 O ci c ugo
 j kwg xqpc. j qi { xcn²j c o clf²r rrgp rgu^a c |. cnk c |
 gi²ul v³4³m dktqfcmo u^an{rqp^av f | ul^adc hqi lc^av
 j gn^agl p0

Mqpuv^apk^arqn{ o^a ukm hrg. c | gwt>rck qrf cn ku
 f qo dqu0 C | ku go gmgf²ugngp²r A^w. cmet eucm T>o c0
 M³4³m^an n³4²r gp. j ktvrgp ul²rgu x¹ p{A^{kn} dgrg c
 v^gpi gtul qtqud>n fgt²mu³4 dgp. c | gwt>rck qrf c^ard>r0
 C | ³4³m² a tco n» v^gpi gt kw dgvt^aqnkm c ul^atc | h³4f /
 dg. ngw²qu^axc c | gwt>rck Mqpuv^apk^arqn{0 G | c

j¹gu Ctep{u|ctx0 G| c j^atqo l²rg qu|vwu^ai cf|c
lpgi c x^atqupcmd x^{3/4}u. xgrgpe²ulngi²o

C| Ctep{u|ctx *Ejt{uqngtcu/pcm j¹kv^am c t²/
i km+ pgo eucm h^{3/4}ftcl|kci x^aile ngw² c v^{3/4}m h /
x^atquv fg rgmkrgi ku0 C u|wco dwk qrfcmrp. c| Ctep{/
u|ctxqp kppgp. f²rhg². c v^{3/4}m rncpm o qj co g/
f^apqm= v¹apcp rfgki c ngtgu v²p{gn0 V³ddu^a|g|gt
3/4o²p{. i^{3/4}3/4²u gi {²d ngtgu v²p{ renkm kw²xu^ao
|cfqm »w0 C wælf qpn²rrgpk U|wco dwn c o qj co g/
f^ap pgi {gf »t^kuk= vgo rno qm u| m nep{cti »u
we^am rku|nqu ukn²vtqm jcvco cu vgtgm^ano k
2r²Agv²mc²ne 3/4u|gxku|cu^aic0

C vto²u|gyj²vc rqpqu x^aku|hcrp kppgp.
g|gp c šv^{3/4}m qrfcmrp jgo|ugi c nel^apqu. hg|gu.
dctpcctē go dgt^atcfcv0 C| weck^atwuqm c pci {
dc|^atdep vi {cpc|qp v¹uwv n²rxkugikm o kv c n²x²/
j^a|k xgpf²i gm cnkm c| cdrcnuqm o gngw šgkrp|uk/
pgnō. Af^{3/4}2²rgm u| »tcnq|pcm o qt|uqi cv^am eugp/
fgugp qkcu»knev. xci { n²x²|i cvcm fkm^aipcn0
C ngrgk p²rgm u|gtgkm c n²x²j^a|cnev. co kv^anc/
n²dcp ngfxgikm c p{kx^apqu jgn²ngv. c v^{3/4}gi gv. c
v²tuc^ai qv ku0 C hqti cno cu Qno gk^ap. c P {v¹t xci {
c| Cvo gk^ap. c N»/v²t. c dgn rg p{v¹ J {rrqftqo /
o cn c u|^{3/4}m mwcu. »t^kuk rctnqndcp. c eugpfgu we^a/
nq. u| m j^a|cm ner wkd»n p{v¹ ukn²vtqnq. vi {cpg|
c u|v¹pr qo r^au. o²n»^ai vgrgu n²3/4^{3/4}u²i jwn²o|kn0
C rgi gpf^au mw{cj cf²u rku|qm kpn²dd c m²rk^atq/
uqndcp n²y cv^an0 C x^atqupcm g| c t²u|g o^at p²o kgi
go r²ng|vgk c hcrk n²3/4^{3/4}w²n O wu|vch nef gwqv
u| An x^atq^atc. U|cmplnk²g0

Gn ngn. |^atm|qw m²rk²p xk^ai c|qpdep c v²an
qrfcmrp. c nqto^ap{| »u^aik pgi {gf. c H²p{gu Rqtvc. c
Dcd/kCrik c v^{3/4}m o kvku|vgtgp^{3/4}m²i g0 K²g eucm
tkn²p lw o²i gn O wu|vch o c fl²nqmpcm kw pgo
uqmngtgupkcnlwmxqn0

Xcn»dcp šl²p{guō o gi šoci cuō ku g| c Rqtvc
o i ppfqnc O wu|vch. co knqt gn u|^{3/4} o gi n²wc0
~ t^kuk hgfgrgu dgl^atev o c ku Ai {^am o kv xcrc0 k
nqt t²i gp0 C| gi²u| v^{3/4}m rqrkknck xgl²tnct kw v/
n²ij cv^a0 K²v xcp c rcnq^alc c pci {xgl²tpgm c u|cpf/

tc^a o pcm c| ^amco vcp^a eupcm c n^ãn^ã {o kpkul/vgt
tkwo pcm c dgn^ã {pgm c xcñ^au/ ²u crr ¶^xa p{^ãi k
o kpkul v²tkwo pcm ²u c| ³uu| gu v³/dd. hqpvcu v³/4³/m ^an
mco j kxcvpcmk0

G| gndgp c o kpkul v²tkwo qndcp kp^v| km ²xu^a | c/
fqm »c c ul^a | o krik^ou dktqfcmqo nqo r rkn^a n^v ã {gk0
f| uk^a »n Chtkn^a »n Gwt»r^a ki p{^ãncm c H^pp{gu
Rqtvc ul^a rck0 Ogtv jku| c dktqfcmqo j^atqo xk^ai t²ul
vñ^amq^a u^a p hgnul km Dcpnqm n^otj^a | cm gi {gvg o gm
kunq²r ãgvgm n^vwu/j^a | v³/o d³/m »tk^auk ul^a mq^a m
c Vqn^vñ^a p. Uwo pgt ²u Rgtc/Rcreeg glvg^v m d^a o w
rvdc O wul vhc n^of gwgv. co knqt gn ul ³/4 xk^v m c|
kp^v| gvd nšj kxcvcmq^o n³/4 u² v³ tc c x^a tqudc0

U ¶p^gu hq^v c uqm uk ngtgungf ²u rqn^a tk
ul^a m». c j^a pqm v³/o gi g ku ô cñ^a teucm nteukp{dgp
U cmppknkdgp0 J^a tqo ul^a | p^a n v³/dd xcp kw gl gnd n0 C
Xcrkf g/J^a p j cvu^a | ²xgu0 C Mxk^vf | ukqi n^v/J^a p. c
U wñ^a ph^ãf /v² t n³/4 gr² dgp »tk^auk ²u c v³/ddk ku ki gp
pci { o² tgv 0 O qf gtp j^a pqm ku xcpcm o^a t < c Nnq{f/
J^a p ²u c| Qfcdcukn0 M³/4 m^vcm vgtgm x^a n^ocnq^a | pcm kw
c n^gi tgp^f gwpgdd ul gi ²p{pgi {gf f gr0

C| wec n³/4 ³/pu² i gA ô Cñ^a t U cmppknkdgp# ô
i qpf qnc O wul vhc. Mq^vucp^v r qn{qp ugo n^v ul km
j qi { v³/4³/m x^a tq^u# Vvd^a pqu. dwt^vul qu. dwi {qi »u.
i {cntcp xcf. d^etd^a twn ³/n³/4 ³/w c^vcnqm v^ãppgnk hgn c
hngvg šul vco dwk^o/qu. j quul ã šI gj tqen^o/qu x^a tquk
l^a t »ngn m n³/4 v0 O kpf gl² ng o qj co gf^a p gz»w< c|
gi {kr vqo k n^g gf kxg. šP wlc ²u U w^a p w^a pcn^o hg/
ngvg rqn^a tck< c rgt| uc ucj hngvg d^a t^a p{d tm^ve/
o^a u. xkn^qi »ul go . j cm^vgul ²f c^vwxcn^o Mleuk/
p³/k² u wtn^o a^a pqm n^r rpgm ²rr nk gi { n^otcx^a j j^a |
cte jckul kmw n^or w^a p ô Mku^a | ukck gi {n^otk wck^vcm
u c v³/4³/n³/4 m rctcpeuq^o k^vcm c ul gr| uwn^ompcm o ck
f gi gp^g t^a m. uc^v p{c rgu^a to c| qwlck0 N^a | kul v³ p j gi {k/
rn^o k ugwpngf pgm d^a vt^vrcpwn c pci {x^a tqu n^oq^uk/
h^qti cm^a dcp. gi {/gi { wec n^op{ctw^v dcp0 O gngv
v^ã m n^otf qm l³/ppgm gl c| ²tf gngu. n³ v ²u l² m krik^o u
j ctequ w^a pk hclw. co gn{pgm gtgf gvg | uk^f » ²u w
t^a pkv³ t p² r gnki xku| hgn o kp^v Utcwuu ¶lc0

P mku u² v³ ipcmc| we^a p. tgp^f gugp r^a tq^a xcñ0

ngi r c | etedd twj^a lwm c | grk^a nv cuu qp { qnpcm xcp = c
n³pp { x^a i^a u w^a p c l²tl c j^{3/4}m^{3/4}o gv qn { cp x^a n^a i /
f^{3/4}l² i² v. rghk² gv k c d^{3/4} » u^a i p^a n = c | cuu qp { r g f k i l »
k f g k i i q p f v c r p w n² r j g v g d d n c v n² l² d i 0

Xcp c | qp dcp M³pu³cp³ k^a r qn { dcp u q n² r g n g t g u l /
v² p { h g r n g l g v k u. o g t v c v^{3/4} 3/4 m v^{3/4} g m g u² u n^{3/4} 3/4 o d^{3/4} u
v g t o² u l g v 0 P² | | Ā m e u c m j^a p { j k c v c r q u c p n² r x l u g r v
2 u u l g t x g l g w n g t g u l v² p { g i { j^a | x c p V^{3/4} 3/4 n t u l^a i d c p 0
J q u u l Ā v c i^a p g i { j c p i Ā h g n u q t q i^a u g l. e u w r^a p u q m²
t² v u² i² x g n n e r o g i 0 K v x c p g n u l^{3/4} c n e v k p u l g t v c t /
v³ u^a t » o c k n e v q r k n w u. c l v^a p c l^{3/4} o² p { u l g t v c t^a u^a =
o c l f c n g r g v k t k w u q m Ā i { o k p v c^{3/4} o² p { . i^{3/4} 3/4 . i^{3/4}
t^{3/4} / d q n^a t. i^{3/4} 3/4 / o c t q p k c. u l^{3/4} / n e v q r k n w u. u l^{3/4}
u l g t v c t^a u^a m^{3/4} p g i { j^a | . u l^{3/4} / n e r f g c k u l^{3/4} / o c t q /
p k c. i^{3/4} 3/4 / q t v q f q z. h g l Ā m r c r^a v k^a t n e 0 C l v^a p l^{3/4} p /
p g m c l q t v q f q z / r q n^a t q m ô h g l Ā m c u l v c o d w k g z c t /
e j c. ô o c l f c u l k / l e m q d k c g i { j^a | = c l^{3/4} o² p { g m
i t g i q t k^a p w u q m² n^{3/4} p c š n e v j q r k n q u l q n³ o^a n p c m ô
c n² i f g c k^{3/4} p^a m » g i { j^a | . c p g u l v q t k^a p w u q n 0 G l g m h g l g
c š d e d { m p k r^a v k^a t n e 0 ô g m u t k d c p K 0 G o^a p w g n c
x c u n g l . v^{3/4} v² p g m k u l g t g r g v l^a u l q w n g t g u l v² p {
g i { j^a | h 0 C p g u l v q t k^a p w u q m r^a v k^a t n² k u l^a o q v x k u g n /
p g m p g x Ā m g n w o k p v c n k^a n { q n 0 ô X c p c l v^a p V^{3/4}
t^{3/4} n t u l^a i d c p o² i u l^a o q u o^a u g i { j^a | k u c U l v c o /
d w n d c p r t q v g u^a p u g i { j^a | x g l g v u² i . l g t w j^a r g o d g p
o g i c p i r k n² p r Ā r 3/4 m k u. c j^{3/4} t^{3/4} g u D k u j q r D n { v j g 0 \ u k /
f » m t g p i g v g i g p ô . f g o² i k n { g p h w t e u c u l g t l g v k u c
š r e v k p t^a l^a n³ o. c n k m š x g n k^{3/4} / l Ā m c r e w n² r g l p g m j k c /
v c r q u g i { j^a | c 0 X g n k l Ā m Q w j q p D g l Y c t v j k r k k l » n /
k u o g t v u l g o² n { k² i c h x^a t q u d c p 0 G i² u l p e r c j k c /
v c r q n e v t » l l c. u l² u l » t v j^{3/4} x g l p g m Ā i { g v / d c l q u f q n^a v
k p v² / x g 0 C n g t g u l v² p { g n g v c m^{3/4} h^{3/4} f k n q p l w r q m k u
x² f k n 0 K n { g p o k p f g p Ā w x c p. o² i c n g i g r f w i q w e d d
v^{3/4} 3/4 m x k f² n g p k u 0

Gr² p m v g x² n g p { u² i g v h g l v g w g m n k c | q u l v^a n²
k p c i { c t n q p l w r q m c x k f² n k n g t g u l v² p { g m l » r k u l o g t v
x² f g m g l k = c o c i { c t n k^a n { w i { c p k u u k f m » v š l g /
t w j^a r g o n k^a n { c o * o c l f c x k f^a i j^a d q t Ā d c p n g u l g p /
p g m l g r g p v u² i g + k u² u k n { g p o k p u² i d g p. c i^{3/4} 3/4 n g r g /
v g n g v x² f q t q u l e^a t t e n g i { Ā w d k q p { q u š f g h g p u a t

hkf gkō u|gtgrgv v^{3/4}v dg c Mergv⁰C ngtgu|v²p{gm
Mqpuvcp^prqn{dcp xcn»^ai qu ^amco qv cmu^vpcm c|
^amco dcp⁰

C n²v x^atquhgrgv. c o qj co gf^apv c ngtgu|v²p{/
p{gn n²v j^{ff}. gi { Alcdd. o gi gi { t²ik n^{3/4}k 3/4u|g c|
Ctcp{u|ctxqp ngtgu|v² V^{3/4} 3/4. f^{ff}u|vgrgp. pci { xcu/
cmu^vo^ap{qn⁰ M^{3/4}pd^{3/4} kf n^{3/4}3/4ndgp 2r^{3/4}Angn⁰ Gi {/
gi { pci { j^{ff}qp pcrqpvc n^{3/4}3/4ndgn^{3/4} j^atqo u|^ag|gt
go dgt l^at^av⁰ G| c u|^{ff}pgu. 3/43/4m go dgt^atco n^{3/4}u lgrgpvk
Mqpuvcp^prqn{v⁰ C| ^{3/4} j^{ff} o^at o qf gtp=^{3/4} 2u l²n/
o k^{3/4}» ctep{ltcpm n^{3/4}4m²i i gn 2r^{3/4}Av c| gnu xk^{3/4}i j^a/
dqt^{3/4} gn v⁰ C j kf cm n^{3/4}4^{3/4} n c hqpvuedd c t²ik co gn|
c U|vo dwx. c| Ctcp{u|ctxqp kppgpk t²u|v n^{3/4}4k
3/4u|g I cnc^vxcn c| gwt»rck x^atqu²u| ngtgungf g²o k
pgi {gf²xgn⁰ I cnc^vdcp xcppcm c pci { ^{3/4} n^{3/4}v j^a|cm
n^{3/4}4 ngn²uk j cl»|^auk 2u dk^{3/4}qu^{ff}» x^amrcvqm dcp/
nqm r²p|x^an»m c uqm ft^ao^av o gi n^{3/4}qvw nqpuvcpk/
p^arqn{k v|ufg 2u c x^ao jkxcvqm ku⁰ K^{3/4}p²v k^ap{^{ff}v
l^am c n²v v^{3/4}3/4m h^{3/4}ft²u| ngtgungf g²o k h²ti cm^av⁰ C
nqpuvcp^prqn{k v|ufg v^{3/4}p{qo »cp ngtgu|v²p{.
i^{3/4}3/4 2u 3/4o²p{ cmwul qm²en xcp vgr⁰ O qj co gf^ap
cki xcp c v|uf²p⁰

I cnc^vdcp ^am c j^{ff}gu v^{3/4}v²pgm k ..I cncvk vq/
tqp{ō 2tfngnu nk^{3/4}v^{3/4}u²cn c o k^{3/4}»p{k j^a|v^{3/4}o gi tg⁰
K^{3/4}gp u|²r n^{3/4}4^{3/4}v^{3/4}u eucm c U|gt^ald»n 2u p²j^ap{ pci {/
vgo r^{3/4}qo vqtp{^at»n p{^{ff}kn⁰ K^{3/4}p²v ngl f fkm c| šgu ō
qu|^vn^{3/4} ^{3/4} gwt»rck pgi {gf. o gtv I cncv c p{^aturqn/
i^atkdd. n^{3/4}4 3/4p²i gu ngtgungf pgi {gf⁰

Rgtc o^at xk^{3/4}i x^atqu. cjqn pgo eucm i^{3/4}3/4 3/4m
hpc²ctk^vm n^{3/4}xc^vgk^{3/4}m 2^{3/4}pgm jcpgo ki c|k x²tdgrk
gwt»rckcm ku. glt²xgn⁰ Nwz^{3/4}wu. grgi cpekc. h²ti cm^{3/4}o .
jw^{3/4}o|^au ō 2u o²i ku o kpf gl xcn^{3/4}qi { u|qtfk^{3/4}»xcn
^{3/4} k o »fqp⁰ Rgt^adcp xcppcm c n^{3/4}i u|²nguggd. i {3/4
p{3/4 we^am kw c Dg{qi jnw. Mqpuvcp^prqn{ j^{ff}gu
nqt|»lc. 3/4u|gu u|²rcu|qp{ckxcn⁰ K^{3/4}v j^{3/4}»fkm ō nk
gi²u|gp c u|w^{3/4}prcm^vm v^{3/4}pi gtrctvk f^{3/4}o dp^{3/4}gi {g/
f²dg ō c u|²ngu. o qf gtp. x²igv 2tpk pgo cnet»
I tcpfg Twg fg Rgtc⁰ G| ngu| n^{3/4}u dd uqn^{3/4}ki ncnj gn|g
O wul vchc ncf gwpgm o^at o kpvkuo gtv^vdqtpqmpcn⁰

I cnc^vdcp c o^at ngl f f f^{3/4}o dj^acn^{3/4}p 2r^{3/4}Av

Rgt^a dc crci Āv xku| hgr0 Dgppg ft»vñ⁴2 ngn xqpv ukm»/
 r^añ{c0 Vcr^a p c| gi {km rgi t²i kdd Gwt>r^a dcp0 Hngvg.
 »tk^a uk ul^a lc c ul vco dwrk i {gtgnngv ul gpv dqt| qp/
 i^a uucn vñ⁴nk gr0 Rgte crcw. ²ul tg ugo xgu| k c| go dgt.
 o^a t hgpv ku xcp. p²j^a p{ rct^a tv c rgi ul gi² p{ gdd
 go dgt ku hgrlw Rgt^a dc0 ~ tk^a uk ²rgv. hqti crqo. cu| hcr/
 vqu wcm grgi^a pu Ā rvgvñ0 Rgt^a dcp xcp^a cm c| gwt»/
 rckpci {ñ⁴xgv²i gm² u nqj| wkn²r xkugrvgvñ0

Rgt^a »n ngrvgtg. c vgi gtrctvq. c Dqu| rqtwu|
 hgr² vtĀp^a gm gn c vñ⁴ddk ul^a | g| tgu x^a tqut² ul gm< Vqr/
 j^a pg= kw^a m c t²i k xk^a i ko r²tkwo hgi {xgt^a tc. c|
 Ct| gp^a n HĀpf Ānk c šo qi {qt»uñ ngtv^a tqut² ul ²u
 c vñ⁴ddk pgi {gf0 Ogtv c| »tk^a uk vñ⁴3/4m xk^a i x^a tqudep
 gi² ul uqt nkux^a tqu l²t gr0 C o^a t go rñ⁴gw pgi {gf g/
 ngr nñ⁴x Ān M^a ul ko ruc. J cu| nñ⁴ ô ..ñ⁴ô gtgf gvkrgi
 hcnw. nkugdd vgr^a Ā²uv lgrgpv ô. Qtvñ⁴. Vgtu/
 j^a p». Rkkr cuc. Qtv^a reuĀ^a x. Glwd. M^a rk| ukqi nw. ud0

C rgi ul gdd t² ul vgt² ul vgvugp c I crv^a »n ²u
 Rgt^a »n hgrl^a gdd. nkgr² c x^a tqud»n xg| gv k^a p{ dcp gr/
 vtĀn ul vñ^a pr crqvcpi {gf0 Gppgm c dk^a pekucp
 ko r q|^a pu o² tgv vñ^a p² tx^a tqupcm rñ^a uc mñ^a p
 nñ^a p{ x vctv^a vñ^a r g| j gvp²0

(00) U| go dgp Mqpuvcp^a r qm{cn c Dqu| rqtwu|
 vgi gtu| qtqu^a | ukck qrf crc l»hqto^a p ul^a o^a vñ^a udc ugo
 l³p c| qwcpk vgr^a Ā²u nku r²rgm^a o c o kw0 C nk/
 n²v^a u gmgpdgp kppgp Gwt>r^a tc i {3/p{3/4 0 Xcrj c
 kppgp l³vgm c vñ⁴3/4ñ⁴m Gwt>r^a dc0 O ci c U mwetk c|
^a | ukck qrf cn x^a tquc ku. o gu² ugp hgm| kn= c n² m x^a
 o 3/4 3/4v. r²reu | vgvugp go gmgf. crki / crki n² v^a » j g/
 i {gm f qo dqm vgttcu^a p ²r Ān0 C j^a w² tdgp o^a t
 nñ^a u »tk^a uj gi {gm n² r nrgpn0 U mwetk ô vñ⁴3/4ñ⁴u crm/
 l^a dcp< ©ul mñ^a t ô lgrgi g gi² ul gp o^a u. o kv c|
 gwt>r ck qrf cr²0 U mwetk dk^a qp{ cm^a tkdcp o² i eucm
 hcn0 Ngi lqdd gugvdgp nkux^a tqu0 C vgi gtrctv nñ⁴/
 xgvugp nñ⁴p{² nñ^a p i {3/p{3/4. grgi^a pu xkn^a m^a mpcn0
 C| 3/4ul nñ^a r gv c euc^a rk| uck j gi {gp ²r Āv fgtxku/
 nqjquvt wcrhc0

U mwetkcn 3/4ul g² r Āv ô f² r g hgm| km v rg.

vj^a v hgrlgdd ô Mf kn³4. c šd^f»hcnw0 G| dk qp{
o^at l»eun^fp eugpf gu. fg j cpi wrcvqu xknrcpi {gf 0
Rgf ki gppgm c j gn^f2 p^a nqw xrcj c ô tqo lck o c ku
n^f v cwm ô c j cpi qu. n^hngv² ngwgn vgn Ej cregf qo .
c| »nqt gi {km n^f t² i kdd vgrgr Ā^f ug0 G| c| = C vrcpvk| /
u| gt o gux^a tqv xqrv c Dqu| rqtu| o gp^v2 p c n^f t² /
i kdd go dgtremc vgt Ā^{ngv}= uqmmen t² i gddk vgrgr Ā^f u.
o kvv o ci c Dk^a pe0 Mf kn³4 dgp² u Rtkpnr q u| ki gv² p
p{ctcn c l» j u. u| gm u vpi gtk n^gxi v n uko qi cvc
Mqpuvcp^v r qn{ r n^wqnt^a ek^a lc0 Rtkpnr q qppcp
n^{er} v c pgx² v j qi { kf g u^a o | v² m c dk^a pek eu^a u^a /
tqm c v^h ddp{ktg o gi xcn^f qv eu^a u^a tk o quvqj cvguv
x² tgn^g v. o gi gi {² d xgu² n^f gu. v»pk² p{n eu^a u^a tk
j gtegi gn^g v0

J^a v^a dd. c| ^a | ulck qrf cn j^a vgt² dgp^a m c| gi {km
n^f t² i kdd² u c n^f pci {qdd v^h4³4m vgo gv 0 Ngllgdd. c
nku^f | ulck u^a tc| h^h4f hgr^f. uqtte n^gl f fpgm c| tk^a uk
ko r q|^a pu. »nqt k go n^f n^gm m^wcm u| qdtqm² r^f v² u| gv^k
tgo gn^o xgm j qi { c| v^h p n^gpp. gi² u| gp c dct/
d^a t. u| kn^f t. m u| km^f u. o ku| vkn^wu x³4i {gmmn vctn^f qv
u^a tc| h^h4f d^gngl² dgp. Dccrdgnldgp. gr^f tlg vgv r qp^v
l^a v gl c| »nqt k xk^f i 0 Kv ko^a f v^h m c t² i k dcd^a tqm
Dceej wu² u c dkd^rck u^f | ulck Dccn per kv^gpgm eu^f a /
rcvqu xgi {Ā^f n^f v. c| qndcp c vgo r n^go qndcp. o gn{gm^f
pgm cuu| ^f /qtqu| n^f pqu. qu| n^r qu uqtek o c ku h^gpp^a m /
pcm² u co gn{gm o² tgv^k o cuu| kxk^v uc o gn^g w c r^a /
tk^k uk xci { n^r p f qpk Āⁿqt k² r Ā^{ng}veu^f a m u| kv^g gn³4 /
r Ā^{ng} v0

Ⓜ G| c o guu| g v^h xqn^f i qndc² u kf ndg p{Ā^h
kf gi gp rgtur gm^f kc. kf gi gp p² r gm kf gi gp m^w v^a m
cf l^a m c| v^h p o gi Mqpuvcp^v r qn{ pcm c v^h4³4n^h /
x^a tq^a pcm l^g m^g i² v0 Eucm cm^h t. j c c| go dgt g| v c uqm
xk^f i d»n³4u| gv^x f m^w v^a v kuo gtk² tv^k o gi c o ck
v^h4³4m n^f n^gppgm h^r ki gwt»r ck h^r ki^a | ulck cpp{k xk^f i /
d»n m^w v^a d»n hcl^v d»n³4u| gv^x f l^g m^g i² v0 C v^h4
t³4m² i Dqu| rqtu| h^gngw gi {km n^f d^a xcn Gwt»r^a dcp.
c o^a ukmen f| uk^a dcp^a n0 G|² tv dk qp{vrcp ku c šdg/
v^g i go dgtō j gn{ | gv^g 0 Gi {km n^f d^a v x² i n^g i gugg^a v n^g r /
n^g p^g v^g p^l g xci { kf g. xci { qf c. j qi { dk^a v^g p^a i qucp
^a mlqp c n^f d^a p0 M^h4 dgp r gf ki o c o² i o² n^f gp crvc.

l>hqt o^a p n¹dck n¹4 v ukmkm vx^add c hqti cmqo . c |
²ngv. c ngtgungf grgo . c jcl>km Dqu rqt wu qp0
 | u c | c dclc c n¹p{gm gu q| o^appcm jqi { kf g/
 i gp pgo | gvgm rgti g¹km ²ng^v v ²u gl gm n¹ v^a m jcu| p^a v
 o c ku eppcm c h¹4f pgm co gn{gv o c ugo wf pcm c
 v¹4³n¹4mvgrlgugp c | ³4² m¹ vppk0

(00) P go vctvw uqⁿki . co ¶i O wu| vhc nef gw ku
 o gi wf v gddgp c | Al xkⁿi dcp c pci { vkmqv. jqi {
 Mqpuvcp¹ p^a rqn{ ²rr Ai { pgo v¹4³4m x^atqu. o kp v c n¹t
 u| An x^atquc. U| c n¹pkⁿ0 C | q| o^a p qm kv o c ku ²rr Ai {
 xgpf² i gm ²u j >f ¶i m o kp v c n¹t j^a tqo u|^a | ²xxgn gl/
 gn w0 Mqpuvcp¹ p^a rqn{ v ²rr qn{ ngx² u² wf v¹ m c | gn/
 o An² xu|^a | cfqm c r w v¹4³4m¹ vppk o kp v c n¹t U| c/
 n¹pkⁿkv. xci { c | gwt > rck t² u| gp n¹ x v¹4³4d¹ k š v¹4³4n¹0
 x^a tq u0

C v¹4³4m² i ³4u|^a | ²xgp^a v x²i | gvgu v²xgf² udgp
²n0 C ngtgu v²p{ Mqpuvcp¹ p^a rqn{ uqj c pgo rgi gv
 c | q| o c p¹km n x^atquc ô gttg c | ki c | u¹ ite l³4w t^a c
 n¹ v² u qmngtgu O wu| vhc c nef gw o^a t gnu . Hecvemt k
 n¹puvcp¹ p^a rqn{ k ²xgk c r w0 C uqtu n¹ u dd Ai {
 cnetv. jqi { ²rrgp jgn{gl | g o clf gi { nqt xku| c
 f | u¹ dc p² r² v ²u h x^a tq u^a v ô qf c. cj qppcp l² n ²x/
 gl tgf gn w g¹pf wncm² u cj qn c v¹4³4n¹4m v¹4³4n¹4m n¹4 v.
 qwj qp xqncn0 Ven¹ p gttg u| qn^a n¹ v c | c p² j^a p{ v c/
 r cu| v r w r l g u gu| vgpf . co gn{gv O wu| vhc c n¹pu/
 vcp¹ p^a rqn{ kj cf kumⁿ dcp v¹4³4n¹0

KXOC xg/2 tnetd > nô c d³4 v³ pdg0

C šJ ctdk{ gj ô. c Xgl² tnetk Kⁿqrc Mqpuvcp¹
 p^a rqn{ gi { km rgi u| gdd pgi { gf² dgp^a mqw0 V³0 ³4.
 > t¹ uk h rck o ³4 ³4w c | qp dcp gmnqt xc r j qi { euqf^a /
 r v qucp pgo c hpp^a m > r q¹ k k n e k t g p f hgi { xgtgu t g k
 p v gm hgn jcpgo ²rrgp gmgp n g | rgi . Al gu| o² m c |
 kl¹ v¹4³4m gⁿ q p f qⁿ u q m r g m g u j ¶i g l 0 Hecv n hqttef c n/
 o^a tq m e n ²u h g i h q t i c v m m e n x q n v v g r g c Xgl² tnetk
 Kⁿqrc0 C rctcpeupqm Tk c r euc v¹ d q t p q m g z e g m g p /

eK²lc. eugpf gugg u| go gy wp{v p³kgpf²mgk u| cmrp/
 hqtcf cm^atnqf^auc gn w ô j ku| gp o ci c ku vqtnki
 xqrv c tgcnek»u nqto^ap{| cwrñ Gul^ai^adc ugo xqkv
³/po ci^apcm c| v j c| wf pk j qi { gl gpv^ñ ku o kpf gp c
 t²i kdgp hqi o ctef pl⁰ P ci { qp l»n wf vc Tk^c ruc.
 o kñ gp x^anq|^auqm hqi pcm l³/ppk o kñ gp x^anq|^auqm
 pcmngmn^ñkgvng| pk^ñ0

O wu| vhc p³kgpf²m gmnqtkdcp o^at j Æu| ²xgu
 gm Æ^ñ0 P²j^ap{ j »pcr o Ækc o gi nerlc c xgl²tnetk
 u|^a| cfquk nkpqgl²u²v⁰ Xgl²tnetk vku| v ngu|. cp²m^ññ
 j qi { gi { gwep rgtaki ku u| qri^anv xqpc c nevqcu^ñi/
 p^arñ Co ¶ c d²euk f tglj vhgkugpi cuugk qu| v^am²u c
 dgtrkpk p²o gv xgl²tnetk kunqñ dcp o^at n^ñu| ²u dg/
 x^anv eucrcwku| vngv n^ñr gl vgm vx^add. cffki Mqpuvcp/
 v^ñp^arqn{dcp c| xqrv c u| qn^au. j qi { c nevqckunqñ u
 f^ññd»n rgw c xgl²tnet vku| vlg⁰ f mcpf »cp xk^ñui^a|/
 v^ñm² tqu^ñri cw^am c| ²xhqñ{co qnev ô ²u cnk dg/
 x^anv c| gi { r^at²x o Ækc. gi { gpgugg c| kunqñrcf/
 d»n c fcpf^atqm²u j cfqu| v^ñ{qm xgl²tnetk vku| vlg
 rgw⁰ Xcñ^au^ñi qu kvgpk euqfc ô ²u vñ^ñp c v³/4³/m rg/
 i²p{u²i j ukgu²i²pgm n^ñu| ³/pj gv. j qi { kñ gp f^ññ
 xgl²tnetten c n^ñu ddk xk^ñi j^adqt Ædcp. c dcl. c v³/4
 t³/ñ³/mgneucmqñ n^ñu p ng| f f³/4vo gi 0

O wu| vhc nef gw ku vphqn{co qm wecv^av x²/
 i gl v⁰ Mqpuvcpv^ñp^arqn{dcp. U| cmrpkkdgp ²u gi { g/
 d^ñAw co ¶ dgm^ññ c šJ ctdk{ gi ÷/dg⁰ Crlc gi { t/
 pci { /dct^av^apcm n^ñu| ³/pj gwg. j qi { gn u| ³/4 c| cn»/
 hqm^ñ nef gwkunqñrc hgn²v^ñrk xk^ñui^al^atc dqu^ñlvq^ñm
 gl v ukm^ñttgn n^ññmqvc⁰ Hgn²gv²m²u gi { gptw^jv^a ne/
 r qw⁰ C nevqck kunqñ m gi { j cpi Æ fg vgn^ñgi gi²u/
 u²i gu²ngv. o gi cfvc c h^ñvcn h^ñpcm c u| Æm²i gu³/p/
 l^ñng|²uv. c n^ñkdqddcp» x²to²tu²mgv^ñ c uqm j cr^ñv^ñ
 dcp^am^ñu²u u| k^aup{gr^ñu k^ñ xgn p²o kgi ngeu³/4mgp/
 vgw⁰

O kg c n^ñi wqn» ²xhqñ{co qv gn²i gl v^ñ. o^at
 gi²u| o^au hgn^ñr²u h^ñvcn l^ñthk^am gn w^ñpm o kp v
 co kñ gp c u| cmrpkkk J ch^ñ o guvt gn w^anqw. co k^ñ
 nqt c| c| go r^ñng| gv^ñ gugo²p{ o gi v³/4v²p⁰ C h^ñvcn/
 go dgt n^ñu²r vto gv⁰ L»c^ñm^ñ u| ng. x^am^ñu²u gi { g/
 pgu^ñd^ñ0 Mku dclwul vj qtf. o q| i^auc i {qtu²u²r^ñpn⁰

O^at o^au p_gxg ku xcp0 O wu| vcl^f d»n ô O wu| vhc
 Mgo^an rgw0 | ur gf ki pgo xcr0 k eu^au^atk škt^af²xcr0.
 xci { o kpu| v_gtk t_gpf g_gwgr0 P go . uqmen gi { u| gp
 t dd Āvqp v^{3/4}v²pv c p²xnki²u| ¶²u0 U^ao vcpv^at^av
 u| kp²p O wu| vcl^f pcm j ¶^kv^an0 | u o kw^ap c v_gi gw²i gu
 O wu| vhc nef gw c u|^ao vcpv^atpcm gi {²dn²pv ku
 m^{3/4}p^{3/4}u ngf xgpeg xqrv ô i { cntcp. u| kp_vg j gn| gw_g
 vctvwc c| »^anev ô c v^at gi { u|²r per qp nk/
 lgnpvgw<

ô O²i ugo rgj gv j qi { dgpp Āpn_gv gi { hqto^ap
 j ¶^klcpcn0 C f^knqm n²tfkn< nk vctvc c| »^avA
 šO wu| vhc00 *Fg o gr^kkm O wu| vhcA* | p o^at pgo x^an/
 v| v_vqm p_gxgv o gtv ^{3/4}gi xci { qn0 *Fg v_g g| gpv^an*
 O wu| vhc *Mgo^an* rgul gnô O wu| vhc. c šnk v p ô 00

i { rgw O wu| vcl^f d»n o^at»n^j qper tc O wu| vhc
 Mgo^an0 G| | gn c šn^{3/4}lqi kō cmwu_{cn} c p²xx^anq|^au
 fqi c gn ku xqrv kp²| xg0 C nef gw rgenⁿ3/4p { x²dg o kp/
 fgp Āw dngt Āv c šMgo^anō o gn²np²x²u g| | gn o gi /
 v^{3/4}v²pv O wu| vhc gu p²xx^anq| v^auc0 Hqi lc o²i
 g| v gi²u| uqt o^au p²xx^anq| v^au ku n^{3/4}xgvk0 P_gxg
 c| qpdep o²i ku gddgp c nef gwkn_qrck Mgo^an c_{rm}
 dcp xqpwno clf dg c v^{3/4}v²pgrgo dg0

00 C J ctdk_gj kl Ā^ai^a pcm hqt_{tc}cm k x^ai { ck
 xcp_{cn}0 C|^amco pcm pl_{peu} cm_{yo}^ap { c< r qn^atk
 u| cdcf^ai²u fgo qnt^aek gi { u| gt gp v_{kn}qw²u d /
 p^{3/4}u^amco gm_{pgu} o q| i cm cn0 *Fg pg hg_{gl}lw Ām gn*
 j qi { V^{3/4}3^{3/4}nqtu|^ai c Dcm^appp hgm| km²u n^{3/4}xgv_g/
 p_{Ān} jcv^atqu Dw^atk^axcn²u U| gtdk^axcr0 C| qmen c|
^amco qmen cj qn Dcv_gpdgti g_{ngv} ngti gv_gm gn n²| cf »
 v_u| v_gm c M_qpcn_d»n²u ^{3/4}u| gu| vtn^arv Qdtgpqxleuqnev
 fqd^aipcm nk c o^auqf km go g_gvk r c_vcc_{rc}n_d»n ô šĀō
 r q_{rk}kn_{ck} gu| o²m lgr² Ār0 V^{3/4}3^{3/4}nqtu|^ai dcp ku c| gn |
 n²v w_{cm}uf »v n²| cf » v_u| v_gm h_qu| v_q^am o gi v_»pl^a/
 »n0 Vcr^ap pgo u| gpw²i v^{3/4}2^u. j c o gi go n²l_ĀĀ_≠
 cj qi { c o ci { ct v^{3/4}v²pgrgo g_{rp} { qo qw²xu|^a | cf ckdcp
 u| kp_vg v_{cf} ¶^k» xqrv D_gj r_{gpv} n²u D_qeun_{ck}»n T^am_e| k
 H_gt_gpeki c š_{td}g_{rn}00 | rr ¶^k { V^{3/4}3^{3/4}nqtu|^ai dcp ku
 j c| ch_{ku} f_qqi xqrv c š_xev_{cp}0²tv. c j c|^a2_{tv} c j c_w/

mqo gmgp ul gtxg|ngf pl0 O wul vhc Mgo^a n c hlcwn xg/
|²tntckp³kgpf²mku g|vc| grkgvxcmqwc0

Rctrcō gpv. hgrgn u²i. fgo qm^aekc. t²i c| km^À/
|kōm dktqfcm^adc vctvq|kn0 C rctrcō gpv²u cmq^v/
o^ap{ o n³4²ug š^avo gpgk kf tgō hgn xqnv h^À/
i gu| xg0 ô šf vo gpgvkgi ô ô o^at xci { j^atqo²x/
v| gf g0 G| K0 Cdf wn J co kf. c šx³4³u ul wn^apō. c
o ckwtemqf » tgo gnō xg xqno

C rqrkkrkrci kunq^a|cwrp. ul gtxg|gvrgp. l^ao/
dqt v³4³m p²r o gi v tvg. v tvg g|v c| »vc. co kōvc
Cdf wn J co kf c rctrcō gpv²g ppcnkf gl²p rveeu|g/
t gp ul²wi tcu|vqvc. u c p²r n³r xkugn ngv tgpf tk hg/
f g| gwgj c| cu^an³fwc0

C p²rdgp gi {xcrcō k vctvqc c štgo²p{vō0 C
ul wn^ap gi²ul u²i k^amer qvc^a mcpf »cp tqul cddqf kn0
Gi {nqt k |ugpkrc^auc jcp{cvkm ru|lej qrcvkmw dg/
vgi u²i gk r gfk i gi {tg p³kgm|gpgn0 Qtxquqm ugtgi g
xgu|k n³4^Àn fg pgo wfpcm telc ugi^agpl0 P go ku
n²t v n^Àm vcp^aeuq0 | ngvo »flc. eucm Ai { . o kpv^amco /
xg|g²ug. gi {gn tg. uclpqu. n³ul »rci o gi kpi cvj cvv
rcp0 Rgf ki c x²i / o^at n³4 gn xcp0 Gi {gn tg jcto kpe
rcmqcqtqxqu u^Ài³4 f km c [Āf k /rcmq²dcp. K0 Cdf wn
J co kf ul²nj gn²p. eugj gm p²o gvgm v³4³n³4m xg/
i {gux0 Oextqi gpk c h qtxqu o quvc^adcp ô o gtv gn
jci {qw det^avp lg dqu|Ād »n nlcfc c fqmqt gmq/
r qw {kf k dgrk pcr n³l^av ô ngi {xgu|vgw ngw²u c|
gi {km m^Àn³4fk n³kgv²i tg o gpgm^Àn0 J gn²gwg Āl qt/
xquqm fqni q|pcm c| wf xctdcp0 Xercō gpp{kv o gi /
nq|wn^arlc c ul wn^ap ô c|w^ap²n vx^add c o ci c
hlg ul gtlp0 O wpcnd^auc²ul tgxgj gv gp eu³mgp0 C
{kf k dgrk t²ul dgp ul wn^apk ul gu²n³. t²ul dgp ngtgu/
ngf gro k²t|²m^an³fwc ul wn^apk Ā go gm ki c|i c w^ak
j »pcr ul^ao tc j k^adc x^atl^am i c|f^alwm gi {/gi { ngi {gu
f²nw^apk n³vqi cv^au^av0 C ul wn^ap šngi ul ngddō nevq/
pck n³4p{g|gvg. c j wul qpp²i { h cf lw^apu. n³ul^a||
pgi {xgp n³4³pu²i gu cf lw^apu. n³4 v^Àm jcto kpegi {
j cf vgu^adqtpqm v| gpn³v j cf qu|v^an³v^adqtpqm n³v
gmgpv²gpi gtpci { . v| gpj cv g|tgf gu. v| gpp²i { crg|tg/
f gu. v| gpp{qre tpci { . v| gpn³v cn tpci { . v| gp/
p{qre ul^acf qu. j wul qpn³v j cf pci {²u o ci c c jct/

o kpenʔv h p{k^a mcpf». {kf k dgk n̄gi h dd j cf kcp^a eu
dw i »p u| qn^a rlc w^a v² u tqul cdd² u tqul cdd j ʔg/
ngv xku| t »rc c eucr cyp^a nu| qri^a n » dcl^v tucnncn0

C xg|² tnetk kunq^a dc ku gmg^a Ān c j ʔ. j qi { pgo /
t² i dcnwukngt Ān o gt² p { ngvgv n^ʔ u² tngm o gi c u| w^a
v^ʔ p gmgp0 G| w^ʔ p c| qtu^a i dcp u| kpv g rklugnj gvgv g
n^ʔ o tgp f u| gt ngw Āt^a 0 C n^a x² j^a | dcp n^ʔ v go dgt pgo
o gt 3/4 u| g Āpk dgu² ni gvpk0 M^ʔ p { gro gvgp go dgt gm
gi { u| gt gp gnv ppgn0 D^{3/4} v^ʔ pA M^{kx²} i |² uA Vgpi gtdg/
f qd^a uA Gmgp tk j gvgv g0 U o ʔi c u| w^a p o ci^a p/
u| ʔj^a |^a dcp. co gn { pgm p² | vgt² p Ān gi { gf Ān
hcepek qr gt gw^v tuw^v xcn c ..U² r J gr^ʔ p^a vō l^a v
u| cvlc. *c m^w ku^a m o 3/4 3/4 v fvgm^v xugt gi hki { grk c
u| ʔp² u| gm o kpf gp o q| f w^v v^ʔ v^ʔ ô c rgtck j kfcnap.
² llgn u^ʔ v² f qn^a qm v^ʔ ppgn0 Cej o gf dgl. c u| w^a pk
ški c| u^a i u| qn^a nc^v vō untw w^w up² m Ārk o kpf gpgug.
xg| gk c x² tgu netcx^a pqnev nk c x^a tqud » n c vpi gt
hgr^ʔ 0 C| qu| v^a m n^ʔ kgv n^ʔ u dd dk cm cu n^ʔ d dgp grlg/
u² ng. j qi { o ci c ku v^a n^ʔ m^ʔ | qw gi { o gngi p^a tk
² lu| cm^a p. n^ʔ ugk u² v^ʔ lc n^ʔ d dgp g| gn c i {^a u| qu o g/
pgwgn0 Cej o gf dgl xg| gw^ʔ 0 C n^ʔ kgv pgo^a mc o gi
u| » p² m Ān c o gi n^ʔ tf g| v< o kv xku pgn[#] k^a gpn^ʔ t² llgn c
ngvnetvgnj » u u| gngt gngpA

Cej o gf ek^a n^w u p^g x^g v^ʔ uugⁿ x^a r^u | qn<

ô J c o quv j kxcv^a qucp ngmgp^g x^a r^u | qrpqo
3/4 ppgm c| v ngmgp^g o qpf cpqo < pgj² | xcucm^v v² u| g/
ngv² u hgi { xgtgngv0 O kw^ʔ p c| qpdc^ʔ p Āi { ku l » n
wf lc. o kv xku| Āpm pgo cnetqmc u| go² dg j c| wf pk0

! u j kf gi x² ttgn dgxc^a quc. j qi { c u| w^a p gmgp/
u² i gkv v^a p^g kmgn c Dqu| r qtwu| p² o c xk² dg0

C| wf xctd » n gi { tg h^w teu^a dd j ʔ gm u| k^a tqi pcm
n0 C u| w^a pk wf xctdc o gi j ʔ^a uv ner Ot0 Dqz. c
j ʔ^a gu cpi qn j cudgu² n. cnk² rr xk^a i n^ʔ Ārk wtp² p
xcp0 C tgp f gu o uqt dgo wcv^ʔ uc w^ʔ p c u| w^a p
o gi n^ʔ tk j qi { w^ʔ pq| c Xkn qu eu^a u^a tv Hgt gpe
L>| ughv² u c e^a tv0 C o cu| m² u c o wcv^a p { r qo r^a /
ucp ukngt Āp gm c u| w^a p x^{3/4} 3/4 itg vcr uqrlc c vgp { g/
t² v0 O^a upcr c| gi { km wf xctk go dgt j g| j kxcv^a qu Ot0
Dqz0 C l> ngf x gn ngn u² i u| k^v v^ʔ p o gi n^ʔ tk c| cp/
i qn. j qi { o quv o^a t w^ʔ pq| c ô o ci^a v c u| w^a pv

ku(00) C dguAi qm c| qppcn lgrgpvkm c dqt^ap{v c u| Ān/
 vppcn0 C| cpi qiv o²i c| per nkwcuf¹ma m Mqpuvcpk/
 p^arqnd>n ô c| wfxctk hwpnekp^atkwu rgfki ngi {/
 xgu| vgw ngu| 0 ô O^au0 C u| wv^ap Ā u| cd>v rt>d^an
 j q| cvpk D²eud r0 C šo²t^vnx²grō n³/xgvng| n³rr
 hqn| km rg< c o guvgtv dgxgl gvkm gi { ygtgo dg0 Qfca n¹/v
 l^am c uctqmdc. gi { pci { peru¹Ā²ugu cdrem gr²0
 U go dgp xgrg jcv hgrhgi {xgt| gw vgw t^a n0 Gi { fc/
 tedki x^atpk ngm0 X²i tg nkp{¹km c| gi { km qrf cn> cl>
²u nktqddcp telc j^atqo nco ct^au0 W^apc c u| wv^ap0
 I {qtucp x²i ki o gppgm c u| qd^ap. c u| wv^ap pgo p²|
 ug lqddtc. ug dcrtc u gi { h²n rgte o Āxc grv ppgm c
 u| go dgp p{¹p> cl>p0 C u| cd>pcm rgfki o gi o qpf/
 l^amxg/ xqnv< rt>dc0 hgn²i g³/ddtg pgo j clmpf>0

C u| gu|²n| gu u| wv^ap o krik> fqni dc hji dgrg0
 Tgi ign³/nqt ngm o²i o kpfki² u c| qppcn ¹>cu| vrc
 o gr² Ā0 U| gtxgl . tgpfg| 0 Oci^ap²rgv² u u| >tcnq|^a/
 uck v¹u^audc eucrcn0 Rctn^adcp tgpigvi mw{^av
 vtv< Ācddep o^at n³v ki c| i cv>² u j Āu| ugi²f wflc
 eucm tgpfdgp vtvcpk c vgp{²u| gv²v0 M¹Ā³p mw{cm>/
 j^a| cv²r¹gvv c uqmu^a|^a mcv u|^a o^atc0 C u| wv^ap
 r²p| hqt^auck r²p| Āi {k o xgrgvk m¹Ā³pdgp^a wgnkp/
 jgvvrgpn0 H gwpvejlc. Jchk Dgkcp²rr o quvc^a/
 dcp jcn o gi < j¹gu ft^aicmi { lvg0²p{²v. ³/o krik>
 hcpm²t^vndgp. w^apcm jci {qo^ap{q| | c0 C šx³/4³u
 u| wv^apō gi {²dn³p v l^au| km c xk^ai v| uf²ngp ku. n³/4
 eu³/p³ngv xgu| hgn0 O¹ gn fg. c j clr¹/j cv>. ³/4³am³
 cfcmq| >. d^at> J ktuej v n o gi p²j^ap{ lgrgp^vmrggp
 o ci^apdcpn^atl^av n xgw hgn cppen^kgl²p j^atqo u^a|/
 o krik>u n³/4eu³/p³ngv. cffki Cdf¹wn J co kf m¹Ā³/4fk
 pci {dcpn^amen fqni q| kn0 C Etgfkv N{qppcku ng| grk
 xci {qp^av0 Kc|. jqi { c pci { xci {qp o grgw J co kf/
 pcm tgpigvi nkcf^auc ku xcp< o ci^av c| gi²u| qtul^a/
 iqv dgj^an> > vknqutgpf tu²i g²xgpv ô j Āu| o krik>
 hcpn^av xku| k gr(00) C xgl²tmetk kunq^adcp ku gi {
 uqt fgvn¹/x fqni q| km ô gi {gn tg j k²dc0 C u| wv^ap
 xci {qp^apcm o²tgvgk² lgrgo|. jqi { co knqt n³/
 u dd. c| gnu xk^ai j^adqt^a w^ap. Pgy {qtndcp K0 Cd/
 fwn J co kf p²j^ap{²t^vm³ti^av^a txgt²utg dqu^alv
 l^am gi {gvv²u| p{gi²²tvu^a| g| gt fqni tvhk²gvgn0

00 Dktvqnd dcp xcp c J qrg/i {2o^apv ku= c xkfi
 ngi pci {qdd i {2o^aplc. gl c dcl»urcVÀ ft^aicm.
 co gn{ gi { kvgpu²i u| qdqthgl²dgp xqrv gi {nqt²u l²/
 p{²p²n k^af nq| vcm c hpcvkmwu j ¶k n0 Co k«v gn/
 nr^v m uqnu| qt eugt²rv i c| f^av² u c| c ngi gpf c h | /
 f³4w j q| |^a. j qi { u| gtgpeu² vrgpu²i gv j q| o kpf gi { km
 wrclf qpqu^atc0

Uwwqi l^a m g| v ku. o^a uv ku0 MÃr³/p³up²n MÃr³/p³/
 ugdd o gpf go qpf^a m nrgvng| pgm vgtlgf pgm gn c p²r
 n³4 v c u| w^a p t»n0 Qn{ cp ku xcp hqti cmqo dcp. j qi { c
 u| w^a p o^a t pgo ku² r#

P go t²i kdgp wi {cpku o gi j cnv K| gv dgl. c eu^a/
 u^a tk twj cv^a t tg0 G| c| go dgt c o gi u| »rcn^a uki j c/
 uqpn^a qw Cdf vn J co kf tc0 O qpf l^a m J co kf uqnu| qt
 hgn ku j cu| p^a nc u| gco rknq. wf xctk Appgr u²i gngp² u
 j cuqpn» cmem cmnqt ucl^a v u| go² n² pgm j gn{ gwguk.
 v² u² tg0 U v o ci c i qpf qunqf qw gppgm c r ngv{ n^a/
 pcm vgtlgul v² u² t n j qi { gugvgi gu o gt² p{ ngv m e² n/
 vrcpu^a i^a t»n i { || g o gi c|³4u| ggumÃx nrv0 G| gn c
 o »f u| gttgn c eu^a u^a tpcm² u šj gn{ gwgu² pgn⁰ u| go²/
 n² v ncuucp o ku| kmwu j qo^a n{ ng| f v n³4 Arxppk0 G|
 r gfk i v^a i vgtgv p{ kv c hrgn vgp uwwqi^a upcn0 Cdf vn
 J co kf o² i ucl^a v kmn^a t^a v ku o gi v² l^a nc cngtgi »l^a/
 xcn ô dgu² rkn ô g| r gfk i eucm Ai { ngj gu² i gu.
 j qi { K| gv wrclf qpn² r r gp kmqrv kngtvgu^{x2} tg c
 eu^a u^a tpcn0 J co kf o kpf ki vglvgu^{x2} t² pgm o qpf v0
 K| gv dgl o gi j cn0 Gttg c| c n² r vrgp ngi gpf c ng| /
 fgw gngtlgf pk ô c| gi {tg gt u³4 klÃv³4/n³4pgm ku
 ner »tcl³4w c n² v² n r ngv{ ne. ô j qi { wrclf qpn² r/
 r gp c u| w^a p j cnv o gi² u o quv K| gv vcmqf km
 j gn{ gwg0 G| gn cmtp^a m c| wf xctk j cu| qpgru m nk/
 x^a nu^a i qu j gn{ gvÃngv hppvctvcpk0 C o gug pck² u
 a v^a u| ». ngi lqddcp J co kf hck² u hrgu² i gk pgxgvp gm
 telv0 Fg o kw^a p gi {Ãi { . tqo cpkmwu² u j kj gv vrgp.
 c p² r n³4³4w d^a o wrvucp gngtlgf v0

P go ku euqf c. j c xcf^a nj ¶gm vgtlgf pgm gn c h /
 x^a tqudcp. o gi c| qtu^a i dcp0 J ku| gp uclv». r qrkkn.
 ktqf cmqo pert»n^a p² r c u| qtqucdd dkrkpeugnlgp xgt/
 i fpgn0

Lgngo | gttg p² | xg. j qi { cp cf v j ¶Ãn c vcr kp/

vexu v̄4³m uclv» c rgt|uc ucj j cñññ v0 G| c r̄rgndgp
 dcd³t pci {Àt. c rªtk|uk o wrv»j gn|gm l»ruo gtv
 xgpf²i g. gi { o qj co gfª p |ctª pfqmÀv cmcmª xcn
 i {kmquª iª r̄f q|cvc rgw0 C egp|Àtc xku| qpv gmknqvc
 c Mef|uct/fkpcu|vc hgl²pgm grj wp{v³t»n u|»n» n̄4/
 r̄ugngv0 G|wª p c n̄4kgvng| j ¶ lgrgpv o gi c v̄4³m
 rcr qndcp<

šC ucj hgn²i g vgi pcr f²nwª p pgo l»n²tg|vg
 o ciª v0C j qnwguv² vVgj gtª pdc u|ª n̄f|qwª n̄6

Co knqt r gfk i Gt|u²dgv o ci {ct nktª n{p² o gi/
 jcnv. vci knw j cñññ ¶²v eucm ¶ { xqrv u|cdcf j q|/
 plqmc u|vco dwkr̄cr qnpcm<

šGt|u²dgv qu|vª m euª u|ª tp² ²u o ci {ct nktª n{p²
 vgi pcr fª nwª p I gphdgp o gi j cññ C| cr̄p g| xqrv<

šC h̄rjª dqt qfª u xkñ i u|gtvg »t k̄ uk̄

Eucm c m̄ññf k hlÀv̄4³m go kiª ek»u rcr qm
 o gtpgm ¶p0 G|gm r gfk i ô jªrc c ncr kwñ ek»m gp/
 i gfvg ²u ¶ {ª wk|uiª r̄j cvcvcp v̄4³nqtuª i k htcp/
 ekc ²u gi {²d rqucj kxcvcpqnm ô ki gp pci {
 u|ª o dcp ngtÀp gm dg c| qtuª i dc0 Cj qn Cdf vn
 J co kf go dgtgk xcrc o gn|km v̄4³m crvxcn»v rghÀ
 r̄rj gw²m c| o gpvj gvgvcp xqn0 Fg c |uctpqrñ i/
 »n²u vgttqt»n xcn» tgwgi²upgm ku xcp jcv³tc0 C
 vknqu tgp f tu²i pgoª n̄ñj cv m̄ññp eugpf tv o kpf gp
 i {cpÀu go dgt o ¾²0 C| hlÀv̄4³m r gfk i gi {tg
 u|crqtqfpcn0 C h̄cvenª i c| j ¶kÀm kf g|c|c0 M̄ññ
 h̄f k rqrkknwqm ku o gtv Àuª i ¶»m ngl fgp gm o kpf
 dgj cv»ddcp h̄j rcm̄|pk rcr qndcp. n̄4p{xgnldgp c v̄4
 t³m rqrkknk xku|qp{qmer0 C xkñ i h̄i {gpk ngl f<
 o kv ku eukª n Cdf vn J co kf. c šx³4³u u|wnª pō c u|g/
 tgpeu² vgp v̄4³m dktqf cmqo d»nA

C| hlÀv̄4³m go kiª ek» hglg ²u u|nggo k xgl²tg
 Cdf vn J co kf »i qtc. Fco cf Ocj o v̄f rcuc xqrv<
 Co knqt rªt²xg o gi jcnv DtÀu|gndgp. Cdf vn J co kf
 o ci c gr̄ ekª ncvc c rcuc ¾xgi {²v. uclª v p x²t²v.
 U|gp̄kj j gtegi p v0 Ngxgrngv kcv c| cuu|qpp{cñ0 M̄ññ
 xgu²i gkxgn fkr̄mªª ekc lgi {l²ngngv kp²|vgv c dgri c
 n̄toª p{j q|< cf lª m nk pgnk »i qtc h̄f k o ctf xª/
 p{ckv. j qi { c o qj co gfª p xcnª u|gtkp v go gy guug
 gn0 C n̄4 dgñ r²u gtgf o²p{vrgp0 P go r̄j gv gn̄p/

vɣpk c j cɪw go dgt go r̄n̄r̄ 0 Cdf wɪ J co kf c | qpdcp
 c j cɪw r w | v go r̄n̄r̄ p̄gm p² o c r t q r c i c p f^a l^a w̄ n ku
 h̄ r̄ 0 Ngxgr̄ |² u² xgn² r r c | gr̄p̄n̄ | l² v² tk gr̄ 0 C xk̄ i c
 r r qm Àtc dgu |² p̄k n̄ | f g p̄gm c r̄m̄v̄v̄p u | w̄^a pt » n
 cnk o² i j c r̄ r̄ w̄^a p ugo j c i { l c d² n̄ p gr̄p̄u² i² p̄gm
 p { w i x » j c o x c k 0 Hgr̄p̄xgr̄ | km Fco cf O c j o w f o /
 xgnv gwt » rck gi {² p̄k i² v. dgu |² f g k v. e k m̄g k = hgr̄ f² | km
 M̄p̄u c p̄v̄p^a r q n̄ d » n x c n̄ u |³ /⁴ u² p̄gm f t^a o c k n̄³ /⁴ Ā /
 o² p { g k v ô . j q i { o g p̄gm Ā v n̄ v h̄ p w h̄^a x c n U | g /
 d c j g f f k p̄p̄gn² u N w h w̄ m̄ j j c r̄ 0 J q i { w i t^a n c m o^a u | /
 v c m c u³ /² v² l l g r̄p c n k n̄³ /⁴ d g p gi { k n^a w k̄ u i^a r c p f »
 j c l » t » n c o^a t^a v m w c v w t c² u j q i { u k n̄ t Ā v x² i Ā n
 o² i k u. g | g t x g u |² n̄ n̄³ /⁴ d g p c h t c p e k r c t v q n̄ k i . O c t /
 u g k n̄ g k i g r̄ w p̄ k n̄ 0 Fco cf O c j o w f c | |³ /⁴ u | w̄^a p k
 u » i q t² u gi { n̄ q t k k i c | u^a i Ā i { o k p̄k u | v g t . p { k v r̄ x g r̄ g k v
 Àtc r̄ n̄³ /⁴ r k m c x k̄ i i r r q m ô² u o k t g c u | g t g p e u² v̄p̄
 h̄³ /⁴ k o c t c f x^a p { c k D g r̄ i k w o d » n c r^a t k̄ u k R g t g N c /
 e j c k u g / d g p . x² i Ā n o² i k u e u m³ /⁴ m p { w i c r o c v v c r̄ i n̄
 p c m c | gi² u | x k̄ i Ā t c c v c t j c v c r̄ p v̄³ /⁴ m^a n r r q /
 v q m » n d g u |² r̄ 0

C n̄p̄u c p̄v̄p^a r q n̄ k x g |² t n e t k k u n̄ q̄ d c p k u w f /
 l^a m o k p f g | 0 C | h l Ā v̄³ /⁴ m x g |² t n e t c | q p d c p v̄k u | v̄³ /
 d c p x c p c h t t c f c r̄ q o f q m t^a p^a k c r̄ 0 C o » f q | c v q n e v
 O c t z » n G p i g n v n² u N c u c m̄ g w̄ n x g w² n 0 C | š c e v̄ q p
 f k t g e v̄ 0² u c š u g l t g p f u | g t̄ o n̄ g f x g p e g u | n̄³ /⁴ g k n 0 V Ā p /
 v̄² u g m² u o g t² p { r̄ v̄ g m n̄³ /⁴ g v̄ n̄ | p g n 0 C j q n e u m r̄ j g v .
 v̄k n̄ q u u g l v̄ g n̄ v k u n̄ r̄ g | p g n 0 C x g |² t n e t k k u n̄ q r̄ c p³ /
 x g p f² n̄ g k u g o o c t c f j c v p c m g n c u | g t x g | n̄ g f² u d g p < c
 h n̄ q̄ r̄ o r q u m gi { k n̄ g c r̄ | c f » O w u | v c h M g o^a n
 p³ /⁴ g p f² n 0

O w u | v c h M g o^a n x^a t x c / x^a t v u |^a | c f q u k n̄ p g x g /
 |² u g o gi² t n̄ g | k m x² i t g 0 O w u | v c h M g o^a n v̄ j^a v ô
² r̄ v̄² d g p g n u |³ /⁴ ô h r̄ n̄ / n k c | c t c p { q u . x^a n̄ f^a | u | g u . u³ /
² v̄ n̄³ m gi { g p t w j^a 0 X g t g u h̄ |² x g n² u o² n̄ { g p r̄ g /
 e u Ā p i . v̄³ /⁴ m g r̄ i c p e k^a x c n h g m̄³ /⁴ v̄ p g j² | n e t f l^a /
 x c n q w u² v̄^a n o q u v o^a t p c r q p v c c I t c p f g T w g f g
 R g t c u |² r̄ g u u² v̄^a p^a p 0 U |² r i³ /⁴ 3⁴ ² u ³ /⁴ o² p { c u u | q /
 p { q m d q n̄ k v r̄ g u c h̄ v c n v̄k u | 0 U q m n̄ v̄³ /⁴ d d g v w i { c p k u
 c | w e^a n̄ p p g o r̄ j g v n̄ v p k c h̄³ /⁴ k i² t . h t c p e k o k p /

v³l^À eu^fn^qu v^ht^wj^a m c^rw⁰ Cpp^an v³/d^d p k n¹du^atv
 n¹v c|qp^dcp p²i {u|go n³4 v c Dg{qi j n^w u|»tcn^q|»/
 j gn^fgk^p0 šCf^ev^qn⁰ g|gnt n c| ²m²p{gnt n pgo o c/
 tcf^vcm hgpp. fg v^hp pgo ku u|^Àm²i g^ugm Pgo c
 v³4^vpg^rgo i qp^flc. j qi { nku n^erc^pf^qnc^m l^atl^qp
 w³pc. o gn^fgm co ^Ài {ku gi {h^qto^a p h^qn^fpc^m r^g ²u
 co gn^fgm ²rrgp Ow^u|v^hc Mgo^arp^an ugo o k n^qo q/
 n^fcdd p{qo qv pgo jci {v^hc c h^hvcn l^htlk ²rg^vdgp⁰
 C h^hvcn v³4³/m v^u|v^gm gm^qtkdcp gi {²dn³pv o gi r^gj g/
 v ug^p kng^vppgm ²u š^vti {k^rci qu^en⁰ x^qnc^m c n^qpu^cp/
 v^hp^ar qn^fk n^gt^gu^v p² { n¹p{q^mer⁰ Gi {n^qt^À ^Àng^fu^qm
 gi {j cpi ^Àcp gt u^fkm o gi. j qi { o k^pf^gpp^cr qu x^qn^w.
 j qi { g^ugh^r c| we^ap h^hvcn v^u|v^gm š^ucpu i gpg⁰
 d^gre^uf^rv^gm c o gm^gv^Àm g^rj c^rf». pgo v³4³/m p n^dg=
 c v³4³/m p m u|gp^vgm ²u u²t^vj g^vg^vppgm x^qnc^m0 O k^pv c
 eucm c t^grc^vk^k³u v²vr²pgm d^kq^p{^qu^atc v³4^gmf/
 v^gm x^qpc. qw c o w^uw^ap v³4^{du}²i dgp v^at^ucf^cm^o /
 u|go n¹rg^v^Ànl^gp c h^hvcn v³4³/m v^u|v^gn⁰ P g x^gi {g |q/
 n^qp gn ddk o gi^a m^r ^qu^wpn^ev c o ck v³4³/m pgo |g^f²nk
²rrgp c Dg{qi j n^w u²v^anⁱcw» Ow^u|v^hc Mgo^an gi {km
²tfgo g r^gu|. j qi { o gi u| p^vgm c v³4³/m we^anp^cm g| c|
 kng^vgp²i g⁰ C n³4 o q^t^an o gi x^an^q|qw ²u o gp^vn pc/
 i {qdd w^cv v^gu| o gi h^gln f²ug u^qt^ap gi { pgo |g^v.
 cpp^an^pci {qdd v^hp²rrgp c| ²tfgo g⁰

Ow^u|v^hc Mgo^an c i {g^to gⁿd n l^htlk^a r^gw h^hc/
 v^hgo dgt u|gt^go gu pgo r^gw⁰ Gm^qtkdcp o²i eucm
 xgtug^gv ug pci {q^p q^rkc^uq^w. k^pn¹dd r^qr^knk^ek^a m^o /
 w^fqo^ap{k²u v³4^vpg^ro k o w^pn¹k^ev⁰ Gi {km g^u dc/
 t^alc .. o gt Pcf|uk gh^hpfk n^euc^rq^w n^ev^qpc^vu|v.
 v^p^qq^w o gi c dg^v u|gt^gv²tg⁰ Fg Mgo^an n²u dd
 d^Àu|n³p ^qlc o ci^at»n j qi { q^rkc^uo^ap{ck v³ti {k^rci q/
 ucm x^qnc^m ²u c xgtug^m n^flc. eucm x^{ku}|c^vt^vq^wem
 ..w^rlf q^pn³r g^pk⁰ ²rg^v²l^av»n⁰

.. o gt Pcf|uk c| ^q»/dct^av. t³/k^f r^at ²x c^rw
 g^v p^km o cl^f Ow^u|v^hc Mgo^an ²rg^v²d n⁰ Fg c t^qn^qp/
 u|gp^x ²u c j k^v c h^gng^vg dg^v n^dlg^p q^w o c^tcf^v Ow^u|v^hc
 Mgo^an dgp^ug^l²dgp⁰ ^q{ x^am^en^c o ci^atc c|v ku. j qi {
 c J ctd^k{g^j dg^rk h^qtt^cf^cm k u^glv š^Àu^ai l^av⁰. gi { n³ /
 |gn u^qm^u|qt^qq^w. ³u|g^j cl^vqⁱ c^vq^w ^qnc^rq^v. t^gpf^u|gt^g
 k^f n³4 ³/n^dlg^p ek^mgⁿgⁿn¹ u^qp g⁰

G| rgw c xgu| vgo C| c r^at j²v. co gn{gv xgl²tmetk
 nkp²gxl²ug²u v²p{r²gi gu dgqu| v²u n²4 v c h x^atqu w/
 e^akp gn²4n²4w. x²u| vj q| » rgw u|^ao^atc0 C šJ ctdk{gj õ/0
 ngrk fgvgn{x/vggpf mngn o gi d{q w cnku| vgm²u vku|
 vgm o quv o^at o kpf gp^atqp²tfgo gngv cnetvcm nqx^a/
 euqpk o ci wpcn0 Gi { u|²r pcrqp xcrcnk dg^atwnc c
 šuglvõ0 Mqo qn{ hqto^am n²4 v0 Gi {gn tg eucm Tk c
 rcu^apcm c| kp²v| gv l»kpf wrcvÀ rctcpeupqñ^apcn0 Tk c
 c| qpdcp pgo kp²v| nrg gw. jqi { c šuglvõ o gi u| pl³/p0
 Gngpng| r²i. hngmtgug ngv²u qn{cuo kv o qpf qw.
 jqi { pgnk ug hAng. ug u| go g0 Euk^arlcpcm c hlcvcqm
 co kv cnetpcn0 Fg »xc kpvwg ngv Koc kn rcuc v/
 dqtqpm»n cnk c| 3/4u| gu ncvpck kunqñ^am o kpkul vgt
 tkwo k qu| v²n^apcm c xgl gv lg xqrv²u c| »v²4³4m hgrh/
 i^au gi {km r²i dw| i»dd j{xg0 Vcñ^ap c|²tv ku v²4²pv.
 jqi { Tk c pgo euk^arv ugo o kv ugo jcmi cv»k gmgp0
 Tk c²rrgp c| gngpng| xkñ^ai p²| gvgv xcmqwc. o kpv
 o kpkul v²tkwo k hngwgug0 Co knqt c| v²p gi {u| gt Tk c
 rcuc gi {Åw vcñ^anc c| gi²u| šuglvõ c| gi {km r²i^atv
 vgtgo dgp. gpp{kv o qpf qwo kpf³4u| g<

ô C| wcm o quv dk qp{^atc o^auv euk^arpm
 o kpv ncvpck hngfcvqnev0 O^at r gfk i g/gp c jgn{gp.
 eucm g| v xqpc u| cdcf vggpl²4n0 M²tgo. o^aunqt vct/
 w| nqflcpcmc| kn{guo kmv n r²i cñ^addku g/gp c j gñ^agp0

C hqto^aru vkn^ang|^auucn o gi ku xqrv qrfxc c
 n²tf²u0 C rncvqknu fqi^an²u xqrv o kpf gp. co kv
 Tk c rcuc jclrcpf» xqrv vggpl0 ~i { o²i ku hgv g o c/
 i^avKoc knrcuc gvgv²i gu jctci l^axnu| go dgp0

C xgl²tmetk kunqr vgtogk šo^autc xcñ^amÅ L»#
 G| gp r²ij gv ugi{xgpk0 Gn ku o gj gvp²gm m kppgp š³4u| g/
 gumAf pl²0 O^atku nkd²tgnv c v²tucu^ai gi { nku i ctul qp
 rcñ^auv xcrc o k n²4n²4w p²xtg< kv l³4v²gm 3/4u| g o quv
 o^at o kpf gp j²v²p0 Fg pgo ngwgm xqpc hlcvcn h²t/
 hcm jc | gpg. kcn u v vcñ^ap p m ugo u| gtgr gngm
 xqpc kvqw c o gi j kv nku rcñ^audcp0 C J ctdk{gj r²i /
 hgu²xhqn{co^apcm o quv o^at pgo gi { x²i| gw p³/
 xgp²ng l³4v gn n²4²lÅm²u jcmi cvc c hlcvcn vku| vgm
 vÅ gu gn cf^auck0 U v c| gi {nqt k .. o gt Pcf| ulj q|
 jcuqpn»cp. Hvj k dgl. gi { o^aukm mteucqw qu| v²n{c
 v²tuum ku hngmtgug ngv< ku dg cnetv^ampk c v²tuc/

u^a i dc0 U | xgugp ku n^a w^a m c | gi { nqt k gmugt gf gw
dct^a vq0

Gi { f² n w^a p c | v^a p Hgvj k dgl dglgrgpvgw. O wu |
vchc Mgo^a n gi { gn tg o² i dgqu v^a u gn w. u | cdcf u^a /
i qpi^a x . xgl² tnetk u^a | cfqu Apcn= xcp^a o p² nk
o² i gi { o^a ukm u | kp² p nteucr qw. n^a | cf » dct^a vc ku.
cnk u | kp² p eucvcm | pk cnetpc c v^a tucu^a i j q | 0 Fg
pgo cnetlc kf g j q | pk c vknqu ren^a utc. j^a vj c xcrco k
gmgu² i g o² i o gi ngup² c | Aqppcp l^{3/4} w² v0 Lqdd
xqpc. j c xcrco gn km pci { n^a x² j^a | dcp kuo gtngf p² /
pgmgn u | ^{3/4} ^{3/4} u | g. c | v^a p j c v^a tq | p^a pcn hrgku | kn gA

i { ku v^a v² p v0 C | gi² u | v^a tucu^a i gm gpv j ct /
o cf per gung c o gi dgu² n v j gn | tg0 Gi { ki gp tqnq /
u | gp xgu m^a ng | . o ci cu. hcvn ekkt vj^a u A x^a tv
tg^a lwm c l² p { gu v^a n^a tcdrenqm o ^{3/4} ^{3/4} w0 Wf xctkucp
dgo wcvn | vcm gi { o^a upcm c | kf gi gp xcrco k p g x v
o qto qn. c | v^a p ng^a ngm n^a x² v tgp f ng n0 O wu | vchc
Mgo^a n² u v^a tuck cncr qu hci i c v^a u c n^a xgw² m c | kf g /
i gp v0 C | ^{3/4} f u | go kf gi gp u | kp² p. nkctw » cp hrgn /
i g v g w0 C | v^a p n^a t f g | gw0 Co kv c | v^a p O wu | vchc
Mgo^a n gm qpf qvc c | gi² u | v^a tuw^a u e² n^a v. c | kf gi gp
hgn^a m v² u | { u | » n <

ô Uclp^a nqo . wtck0 | p K o ckn r euc gzggngp /
ek² lc A u^a tp { ugi² f lg xci { qn0 C | wcm r gf ki o quv
hgnv p² u p² m^a n^a x guugpgmgpi go 0

C u » d^a n^a p p {^a o gtgf v. gi { gptwj^a u v^a tucu^a i .
o kvj c^a nqo dcp l^a tpc. nkxqpwn c u^a tp { ugi² f f gn c
dgl^a tvki 0 Kv hrgkw² m n^a /⁴ gp { gknv² u gi { r gte
o A n c o^a t euvnqw j wncu^a n^a | » u | gt . hngvg nxcu /
nqeukdcp vcn^a n^a m o ci wnc0 U go dgp xgn^a m u | wtq /
p { qu / r w n^a u .. | cdv² nō. tgp f t^{3/4} n0

Co knqt c ncvpck d^{3/4} v^{3/4} p o ci^a p |^a t n^a lc dgl^a /
twv c n hgi { xgt | gw O wu | vchc Mgo^a n xgl² tnetk u^a /
| cfqu o ^{3/4} ^{3/4} w. c | wf xctku u^a tp { ugi² f o² i gi {
r gtetg dgp² | gw j q | |^a 0 Eucm p² j^a p { u | » v u | » n v c |
gi² u | gp o ci^a detqunef v hqi qn^a pcn <

ô U^a | cfqu A . x² f A { x² f gv pgo ngm n^a t plg0
V^a ti { c n^a u pgo ngu | 0 hgn² i g. c eu^a u^a t wi { cplu u | g /
o² n { gugg n^a p f ^{3/4} p v g p k c | ^{3/4} p^{3/4} muqtuc hrgw00

X0C /uctpqm0

00 Pci { vqmp^a u c nqpuvcp^a rqn{k we^a nq⁰
C p²r eucm^À { ¾¾p^rkm^c Dgukm⁹ u hgr⁰

R²pygm xcp⁰ G| c o qj co gf^a p xcu^a tpc⁰ C rcfk/
ucj ô ko o^a t c jcto kpepgi {gf km pgo |gf² m wi {cp/
cdd»n c f kpcu| v^À d»n ô jgvk šu| gco rkn^a vō vctvc⁰
uk jci {qo^a p{< c u| wv^a p gi {u| gt gi { j² vgp o gi /
o wcvlc ko ci^a v p²r²pgm< c| k r^a o jgvgn² pv xku| c/
v²t Æppgr pcr^l a p l²p{gu m^À u²i gm n²¾¾¾v xqpwⁿ c
vgo rmo dc² u wi {cpeucm Æppgr k o gpgvdgp v²t xku| c
rcmq^a l^a dc⁰

C nqpuvcp^a rqn{kcm pgo wfpcm dgvv^rpk gp/
pgm c l²p{gu uk u| gtvtv² upcm c u| gn^o rkn^rcm r^a v
x^a p{^a xcn⁰

©ppgr pcr xcp< U| vco dwn p²rg t^a2t d^ao²u| /
nqfpl⁰ I {cmi . nqeu^k. ^atco rkm c v²o gi c I crvc/
j²f qp. c I tcpf Twg fg Rgt^a p. Qtvⁿ¾¾¾p. H^Àpf Æmkp
^avc [kf k hgr⁰

C i {cmi quqm ngu| qtwpcm c i {cmi l^at»t»k c|
Àv^gvgp c rcu^ucp jcrf» nqeu^km n²¾¾¾v eucm Æ {
jgo |ugi pgm c rktqub| gu xci { wtd^a pqu qvqo^a pqn⁰
Uqm v²¾¾¾m p ku xcp n²¾¾¾v Æk c r^a tk uk fkc^vgn f²vc
pgo |gvⁿ¾¾¾k gi {gptw^a v xlug^rkm o^at< eufⁿqu. xk^ai qu
vch^v d»n n²u| Æv jctcpi u| qnp{^a v ô pci { . u² ngu
uqpn^c Àlcm^r C| ctewⁿup c| qpdcp qw xcp c jci {q/
o^a p{qu l^a v{qn⁰ f wgu| . h²qo nku l^a v{qn o ¾ Æn xk^r
n²i pem gn c jquu| Æ rkn^a l^À rct^a |u| go gm pgxgv^gm c
l²cepk rktq^u»x^cn² r²pn²gwu^a lcn⁰

H²vcn o wpm^a u^a p{qm dqnk gn²tw^u»p m nctq^p/
h²i xc t²pi cv»| pem jquu| Æ uqtdcp. cm²teucm c p{w
i cvk x^a tqum l»ngf x cuu| qp{p²rg⁰ N^a u| cvc gi {/
ngf x gp. xcn² l^a dcp *² r²pm² tf gm f² ugn n²¾¾¾v km
u| go o gn c l²tkcm c jquu| Æ u| qnp{^a m cnⁿ kw/qw nk
xk^rcp» rcm²ek u. crt» r^a dcⁿv⁰

Pci { . p²i { Æ² ugu jk²»m »t^k uk rcpf cvgtgm v p/
pgm hgn c v²o gi dgp. o gi tcn²wcp pcr gtp{ u n²eci ». .
u| kx^a tx^a p{u| f² twj^a ndc ¾¾¾¾¾v l²cepk p mgn^r=
h²j² ttw^a u. n²pi l^a v{qn^u co gtn²ek cpi qn u² r²u²/
i gmgn⁰ C j ¾¾¾ { gi {gpgu fgt² m²en Æn c h Æ² ugp. o gn²

ngwg jcp{ci wn f n j^atc. xcuci ul kxctten ul^al^adcp
c i excn²t0 C nku²ugp hxcwn n²p{qm h²Am pgxgpgm
h²ti qn²fpcmk i cvqwx^atcnq|^auwndcp0

Ngul o c o kv²|pk0

Ko r q|^apu ul^apl^av²m ng| f fkn²c j gvk f^au| hgxqpw/
n²u. co gm|gn²tfnguu²i. gzqknuu gtgf gku²i f qn^a/
dcp. pgo xgvngf j gvk m gi {gvngp qtu|^ai nevqpc rct^a/
f²lc ugo 0

KO Cdf wn J co kf ul wn^ap m²Ap vgo r nqo qv²r^av/
vgvw o ci^apcm ucl^av ul wn^apk x^atqt²u|²dgp< c [kf
fk dgp0 K^aki uqtcnq| km hgn n²hgn n c uqng| gt h p{k
ul^a| h²ng gi {gptwj^adc^{3/4}3/4vnevqpcu^ai 0

P cr dcp^aqvw. ul²r xqp^au² l>p^{3/4}2u n²gi²p{
o kpf p{^alcp0 Gi {gptwj^alwm ul²Ang. xci { n²m eucm c
n²du|^atx²f hgj²t²u c rktqu hg| gi {h²qto c xcrc/
o gpp{k p< ul kpv n²pi qv xgv c n²r c pcr h²p{dgp. o kpv
gi { >t²ukr kr ceuo g| 0

C nevq^am gn w. cnkm rc|^ap vctv^am x^anwnq
r wun²lwnv. ctc p{uwl²uqu vku| vgm n²r ngf pgn0 Gi {/
o^au o^{3/4}2 uqtcnq| pcm u t p t²vgi g| gw uqtqndcp0

L³ppgm c vpi gt²u| gn²c pgo | gm^{3/4}k u^{3/4}n²m
gi {gptwj^av j qtf^am nkj clvw. pci { hgj²t i cn²tter0
C hgl²Ap c| qpdcp m ku hg| v xkugrpgn0 W³pwm Ai gv
c n²pf|u^a n²xcu^ai f qdqi ». tqj cf » ugtgi g0 P {q/
o wndcp w^afn ul qtqi c ekkm^{3/4}3/4pu²i = c o gn²m
we^amo²i gi {tg qp^amc| go dgt²o gi gv0

C| w^ap gj gn| g| ngf gw c nevqpcu^ai 0 U qtqucp uq/
tcnq| vcm hgn gi {o^au o^{3/4}3/4v c fgt²m|^{3/4}dgp o gi/
v^{3/4}v j quu| A Axqpcnq0 C nevq^am hgu| gu vct^audcp.
ctecn gn tg^ampcm= c n²3/4pu²i c| qpdcp n²x^apeukp
p²| gi gv hgn². c [kf k f qo dl^atc. cj qppep c ul w/
v³pv x^atl^an0 O gi r knpwpk eucm cnknt ngj gv. j c o clf
gn dwmcp c ncp{ctqf^aud>n co gn(v n ng| fxg c| w^ap
gi {gpgup xku| c| Avc J co kf k²/O qu²ki 0

X²i tg o gi lgrppgm c P ci {A n²3/4grf²u²pgm gu
j^atp^{3/4}ngk= o qpf j cvk h²teuc šj^atp^{3/4}ngk0 J qo qnq/
x^{3/4}t^{3/4}ngv ekrgn ul qn^am g| gn0 Hgn kpv m c| Awgugv
j qo qmen j qi { c| wf xctk j kpv m uko^ap. |^{3/4}m²u

p²m^ān i 3/4f^ān j guugp^gm x²i ki tclwn⁰ O kpf^gp n^xleu/
 2^{tv} m^ān³/p j clq^rpcm ng< u| cr qtc n^ř|| gn xgu| km hgn 2^u
 v^āp^gvkmg⁰

Kuo 2^v n^ev^pa m xq^pw^rpcm hgn c o gn^řmwe^and[»]n<
 i {c^rqi quqm n^xcuqⁿ0 G^rj gn|g| ngf^gp^gm c o^at tgp^fdgp
 hgn^řn^řq^w euc^rcvqm o 3/4 3/4⁰ O gi 2^{tng}| gw c p²r u| gt
 v | qn[»]u^ai ku< c o ci {ct u|^ato c|^au^ā it>h U 2^{ej}gp{k
 .. f³/p rcuc u| gtxg| v^g o gi |g| v c| k^pv²| o 2^p{v. M^qpu/
 v^pkp^ar qn{ pci { jcu| p^atc⁰ C u| gi 2^p{p^gi {gf l^řd>n
 2^rā^v. c n^gngk go dgt n^ř4 3/4 d³u 2^u i q^pf v^cmp< i {cm^ř
 tcp ā^v nk v | c x^atqudcp⁰ O quv o^at ngx²udd² xgu| g/
 fgn gugm c r wu| v^řv^ř uck= c u| wⁿp o gi ku dgeu^ārk 2^{tv}
 c v^gvu. qn^qu^u go . v^ř4 3/4 nko^af>. kf gu^ato c| qw o c/
 i {ct⁰ Cpp^gm c dgeu^ār^řup^gm gi {km lgrg. jqi { c v |/
 qn[»]u^ai ku f^ř| hgn^xq^pw^řuv tgp^fg| jgv c u| gn^řo rkn^qm
 per l^ap⁰

L³p c v^řdqtk qtxquqm o qf gtp^ān hgn| gtgnv euc/
 rvc= x²i ki xq^pw^rpcm c uq^thc^rm n^ř4 3/4 u| ci qu^āxgi g/
 kmgn 2^řp n^řv u| gtgkmgn j c pg^vp tqu^uwn v^cř^řpc
 n^gppkxc^rcnkc pci { v^qmpⁱ a udc^p0

| n^řpm n[»]p{gt^řv²u. n^řdf qdqⁱ a u. xg| 2^p{u| cxc^m go /
 dgt| uqⁱ a u⁰ R^wcp^auki hgu| ā^v x^atcn^q| a ucn xcp
 v^gng c n^xgi 0

X²i tg. x²i tg o gi ng| f fkm c hgn^xq^pw^řu⁰ \ a tv.
 ctcp{q| qw hngv^grcn^qu j k^p»kn^lcp c u| wⁿp h^gru²/
 i gk 2^u n^ga p{ck p{kl^am o gi c o gpgv⁼ ngw^u2^{xgn} ā^v/
 p^gm gi {/gi { n^qeukdcp⁰ C n^qeukm n^ř4 3/4 2^u o gm^gw n^řr/
 ngf pgn< c j^atgo t³ā^ř. u| qnⁱ a m ô v^řddp{ktg p²i gtgm
 ô ô u| c| ck c jcuwⁿp u| gtvt^vuqcp 3/4u| gmw^euq^rv
 n^ř|| gn⁰

C n^ev^pa m hgi {xgtgk^pgm o 2^{tp}3/4nk rqp^vu^ři i cn
 gi {xq^prc^t k^ap{ř^qw uq^thc^r ā^vx³/rk c| w^fxct j³/r/
 i {gk⁰ C| qm n^řx^apeukcp n^epf kn^řpcm nk lqddt^c/d^rtc
 c jk^p»m j qo^an{qu j^awgt²d n c l^řrkⁱ n^ggtgu| v^gw n^q/
 eukdrcn^qmo 3/4 ā^v0

C| w^fxctk hⁱcvqm o quv o gi 2^{tng}| p^gm c o qu² gr⁰
 K^v l[»]n^qtc u| cdcf v²tu²i xcp= d xgp gn^řt tclw n^řv
 q^rf^cnv c jk^p»m ugtgi g⁰ C| ctcp{u^āv³uqu n^qeukuqm
 f^ř| dg³ā³/4 3/4 h^wrl^vtqm ngwⁱt^apcm nk^hqi l^am c n^q/
 xcnev. 3/4u| g^qri^am c jk^p»nev. c| w^řp gn^xg| g^vkm c r c/

tk^anc⁰ C o ci cu wf xct j^{3/4}i {gk c n^ueukdcp o ctf/
pcm²u l>ngfx gp p^gxgpgm v^tghgt²rpm p²i g/
n fpgn⁰

O krcw gl v^{3/4}v²pkm ng|f n^{ic}rcmw^{pk} c ul wⁱ
v³pk o gpg⁰ Gn n c eu^aul^atk j gtegi gm l^{3/4}ppgm ô ltkp/
f gup eucm Cdf wn J co kf hck ô nk i {crji . nk n^up^a/
vq⁰ O kpf gl gngv mco ct^auck ul^atp{ugi²f gk n^ui²tkm
j c eucm^{3/4}n^{3/4}p{k ku⁰ M^{3/4}n^{3/4}p. ul^a{xfgt^v n^ux^ap{qu^ai c
gl c i {gto gnk^af» v^{3/4}o gi p^gm< c ngi n^uugdd crt>^uaⁱ
ku f^u|gi {gptw^adcp r qo r^a| km gl tgf gukdgp pgo ku
gi { n^{3/4}Ä^{3/4}n⁰ C ngi kf ugddgm c| qpdcp o^at o gi ngw
l²thkn⁰

Dwtj cpgfflp. c ul w^ap n^ueuk h^c 2u ngfxgpeg. c
j cf kgpi gt²ul v^ul vgm gi {gptw^al^av j qtf lc. n^uo qnⁱ
o²n^uaⁱ i cr⁰

Ngi d^alqucdd n^ux^ap{ c j^atqo ngi n^uugdd ul w^ap/
h^kÄ⁰ N>j^avq Äⁱgv c p{qregul v^gpf u⁰ Gi {gpgu vct^vu/
dcp. h^gul gup. d^atcp Ä^ko gi rctk^al^av⁰ O^{3/4}Ä^{3/4}g n^u/
xci qpcm ul^atp{ugi²f gk⁰ C o qu² ngungp{n^ureu l dg/
l^atcv^paⁿ ngwi tpcm c n^ut>n²u c j gtegi k gl tgf gudg
j gnⁱ gl ngf kmvpi gt²ul i {crji u^a i^a pcm² r²p⁰

M^{3/4}xgvngl km^{3/4}eeug< gl eucm^{3/4}gul v^gpf u²u n^ueuk/
dcp²tn^gl km c rct^af² ul^a{pj gn²tg⁰ C o qu² gn w ul qnⁱ
i^ak n^up{k^am gn wg c n^ueuk clv^av= gi {km ul^atp{/
ugi²f g t^ago g^uk gi { l^ao dqt. j>h^gj²t rctk^atc²u c|
^{3/4}gul v^gpf u rctcpeupqm ku g^hqi n^ulc j gn²v gl tgf g
gn v⁰

K^uo²v gn i^{3/4}f Äⁿ gi { j lp>⁰ C ngi n^uugdd j gtegi gv
c p²i {gul v^gpf ugv go g^ukm nk dgn ng⁰ ku o ci cutepi Äⁿ
ncvpc< v^{3/4}n^{3/4}ngvu. gn^a ul^a g^ulpv^k l^av²ngi {gptw^av
ncm^ueuk^o v^a xlugn²u p{cn^adcp n^uo qnⁱ eu^aul^atk tgp^f/
lgrngvj qtf⁰

v pgo Ä^ugvkm n^utc. jcpgo h^un^un^um^a c o qu²
n^ureu l²tg⁰ Qw^am h^ul gu vct^vudcp c rct^ap{k gl t/
fgu= gffki o quqnⁱqw. h^ueugi gw n^ui²t kxgn t^apgx/
vgw c| Ä^fx^{3/4}n uqne^uitc= i {gto gnk d^alqu^ai^axcn
xgwg o gi c ul^a{xgvng⁰ Gw n c r gtev n ng|fxg c| qpdcp
ncvpc⁰ H^ul gup^am n^uo qnⁱ cteecn o clf j k^uv^ggp
nk^apvc l>n^utc |ugdⁿup{k nctf qeun^al^av²u nk^uqv

netffcn l²thku n²o qn(u²i i cn x²tlc c n²i hgn dd jcf/
wtecvô c rcr^avô

C n²4²gngl lgrpgv o^at c u|wn²p u|go²n(gu
n²4²grf²u²v lgrpvô J dg ruc. c u|wn²p ku²m>ogv/
vgtg. n²v rgo r^au ctcd u j^acuqx²cv xqpwncv hgn x²i ki
c| Àxqpcmp. c rcm²v>n c vgo r²no ki 0 ~i { n²4²a plc
c| uk jci {qo^ap{<c u|wn²p c u|gn²o rkm w²p i {cm
tcp n>j^avq vgu ko gi c| wcvxku| chg²0

Hkvcrcdd nqt^adcp Cdf wn J co kf u|wn²p
2²iv ku c| uk u|qn²uuc² X²i ki n²xci qn² c l²n x²tq/
uqp ku<jc²ff r²uuc c p²r. o gpp{k ki c| cdd>n jqi {
l²rkcm j^avi gtlpeuqtxc^auqu. xci { jqi { pgo ku²n
o^at0 O^aunqt o gi jclt^a. ugdgugp jclcvqw c n²4²p{
lwmgtm²eukdcp0

O kpf gl t²i c o Àn²0 Cdf wn J co kf qv pgo u|>tc/
nq|vc²lc v²dd² c| grkuo gt²u²u c d^ao wcv ô o^at
pgo jkÀ c urqtwgrgu²o²p{gk²g0 C eu²u^atk n²euk
2²u c n²v xkj ctugdgu²i i gn gnw²cp> rgl gn w n²vq²/
fcv o²n(gp o gi jcln> v²o gi n²w^ap{^av ku u|4²gugp
grpi gf p²0 P go n²4²a peuk c| Ào gpk h²g²ntc 2²u c
jci²ntc go r²ngl vgv ekrtwqntc0 C [kf k ngtvlgkdp
u|gdd. ft^ai^add p³4²p{gm n²4²3²v u²v²ijv ô dk/vp/
u²i dcp0

C v²o gi gv co gn{ xcrcj c wllqi xc Æ x³4²4²ng
v>ptc²r²u²v²u co gn{ n²4²3²v o c tquu|cv vgtxgl .
u³4²v dwn²n> crcm²nev r²v n²r|grvg. i {cpÀu²u
w²rlc0 Eu³pf dgp u|gtgv rppk n²gv n²i gi {gf Æo
P go wf p^a o gi o qpf cpk o knqt n²gv^av wq²ta tc
ctcp{q|qw eu²u^atk n²l²n^adcp c Dqu|rqtwu|qp. jqi {
c u|mwctk vgo r²no dcp ko^af nq||²m= c| Clc U|>hk/
dc ku eucm²xgpg gi {u|gt o gi { gn jqi { ô co kpv
n²4²ng²u²i g ô o gi eu>n²rlc c rt>h²vc qw t|³4²v
n²lv^apl^avô

J c c jci {qo^ap{qm o gn(gp vgn²p²n(g p{wi/
u|kn xci { wcm²qf>k vppkxcn>k c p{kx^apqu²i gr²
u|>h²ma n<n²pu|gpxgf²u pgnô O kpf gp egtgo >p^kv c
n²gv n²i t³4²kf gddtg hji. o²i c euc²rf k 3²4u|gl³4²g/
vgrngvku0

O ci^apqu go dgt o kpf gp |uctpqn0 C jcvn²o <
wpcn²o 0 O²i ugo wf rgo qpf cpk t>rc. cnk gi {u|gt
dgrgm>uq²n0

UqmqtMÀ $\tilde{A}x^{3/4}v$ xgl²p{u} » jctucp o quv hgn²u hww
 x²i ki o gi uqm|qtq| » fxc c nevp^ui uqthc¹p0 C
 eucrcqm xki {^a||/^am¹udc x^ai l^am o ci wnc⁰ MÀt^u| ». f
 qdr gti²u0 C v|g|gtp{k nevp^c jktv^ggp vku vgrg/
 vku vgrgv^fut^c hgu \tilde{A} n0 O quv o gi rgtf \tilde{A} n xcrc^o gpp{k
 fqd0 Hgn jctucp o kpf gp vtqo dkc< c |gp^{gn}ct dgrng| f
 c eu^a u^a tkj^a | kpf w¹l^adc0

C J co kf k|g/kpf w¹ o²n¹u¹i i cn vgrlgu rgl^vu .
 o²i ku jctekcu. x²tv^rgluf¹v \tilde{A} go gk v^{3/4}nm dg c|
 gi²u| v²tu²i gv. co knqt o gi lgrg^{pk}m c f^qo d rglv l²p
 c u|w¹p hqi cvc. c ncp{ctw^{rc}v gn w. co gn{gp v \tilde{A} n c|
 \tilde{A} xqpcn dgrqtnq^{nk}< c rrc^qv v^kqm¹cvqu »tk¹u/
 ncr w¹l^adc0

Hgj²tgi {gptwj^au. hgj²t n¹xckm p{gti²dgp \tilde{A} g/
 o gup go gm^{gf} ²u c¹u¹a^m v^gut^{3/4}n eucrcv gn |k
 o gi ck¹ wf^xctk jkp¹v⁰ M²v rglⁿ j \tilde{A} |c c o ci cun^g/
 t^ghe f¹u|n¹ueuk. co gn{pgm rcm^{lc}. ctep{c gi {ct^apv
 u|kn^a|km c pcr l²p{dgp0 C dcn^{up} o gtgxct \tilde{A} n¹ueku
 v¹lc o q|f^wrc^{rc}p xcun¹||gn c n¹xcm i {gr n l²v0 O gn/
 r^gwg c| k^{pc}< t²i ko »fk n¹gr^gv^gugp d p^{ct}aⁱqu. c|
 ctep{uwl^vuqm crcw xcⁿu¹i i cn gn^v p f¹u|gi {gp/
 twj^adcp0

C hgj²t d t \tilde{A} r²ugp. c jkp¹ o²n¹(²dgp. gi {gf \tilde{A} n
 \tilde{A} n c u|w¹p0 C f¹u|gm u \tilde{A} v¹uqm u|¹pgn¹< ²u l²p{gm
 qti¹k¹lc n^{3/4} ^{3/4}v co gn{ o kpf gpn^v f¹u|¹ n^{3/4} \tilde{A} r^{3/4}v. o²i
 c n¹i n¹ugdd t^{cp}i \tilde{A} u|qⁿ^anev ku< c| gi {gv^{gp}. cnk
 gi {u|gt . uwl^vu^{rc}p ²u ctep{q|cv^{rc}. u^{3/4} v¹m
 gi {gptwj^av xk^{gr}0 Eucm gi {gv^{gp} t^{gp}f l^{gr}pgm c| Q|/
 o^ap/j^a|k^{gp}f pgn¹< i {²o^ap^{qu} o gf ckn^{pl}c uwi^at|km
 nk gi {/gi { rkn^{rc}vtc n¹d^a v^apcm n¹j cl¹lc cn¹0
 Oq|f^wrc^{rc}pwn \tilde{A} n o gtgx cteecn eucm p²j c vku vgr^gi
 p²o^ap c r^gm^gugp ²rl^{gp} v^{3/4}o gi h^{gr}? . hgj²tn^gu|v¹ u.
 h^{gr}v p gp n¹ekup{ n^g|²xgr0

C| c o ci^apqu go dgt. cnk n¹ueuk^{lc} o²n¹(²p uwj^{cp}
 gn c p²r gn w. pgo u|²r go dgt0 Qttc n^gugn¹ qtt.
 j^qo n¹euq^{pl}c n¹svi t>= gn t^gm^vpⁿqt¹q^w. h^gn^gv^g u|c/
 n¹m¹ o²i eucm h^qn^q|c cte^apcm t^{ci}cfq| »/o c^fa^t/
 u|gt u²i²v0 f o g| c| cte o²i ku k^or q|^apu c o ci c
 gi {n^gf x ²u n¹k^a dt^a pf w^v u|qo qt \tilde{A} i^a dcp= c x²n^{up}{

crim ucx»u gi {gpgu²i g v^{3/4}j gvgvpp cnetcvt v^a twn
gn c u^{3/4}v^a v^a v^a j cvcvcp u| go r^at² u c o ci cu. i qp/
fqmuf » j qo nqm² rgn gvgu vknqncvuglv⁰

C p²r kpn² dd² t| k o kv n² vlc. n² vqrf crk»n u^a tp{/
ugi² fgm² u neo ct^a uqm uqthrc n^{3/4}² u| kvg g²glvgw.
i {qtu hqi cv^a dcp n² vo^a u o » fl^a tc o gngwg gnwj cp»
w^a v⁰ Fg g| c|² t² u dk² vqucp o qpf lc< c u| w^a p.

c o k wvwn⁰ ©t. gi {u| gt . r ktqu hg² v n ng| fxg rnm/
ekr u. nkeup{ n² dc j gi {²ki 0 .. x² kw o kpf gp< c tgp/
i gvgi ncvpc. c i {^{3/4}p{^{3/4} j kv»m dqpp² n c o² i i {^{3/4}
i {^{3/4}p{^{3/4} dd u| w^a p^a mnc= ^{3/4}x² c [kf k. ^{3/4}x² c x^a tq.
^{3/4}x² c j cvcn⁰

ô Eu»m lcuc# Dkp lcuc# *G| gt² xki² rlgp#- ô
wllqi cpcmDk^a pe p²r² pgmn² ugkw»f cl⁰

C u| w^a p gi {gf² n² n² c j^a v» n² ugp. fg c|² tv pkpeu
o ci^a pqucp n² eu^a dcp⁰ U| go dgp xgrg c nku n² ugp
n² I j^a | k Q| o^a p rcuc. c j^a | gu r n² xpck j u. C hg² t/
u| c^a m^a cu| vo^a u. x² p r cn² vco ctucm o c o^a t eucm
^a tp{²nc c j clf cpk š r n² xpck qtqu| n² ppcn⁰ < fleu u²/
i gu o n² m^a pcm go n² n² v c| qpdc p t| k c š I j^a | k⁰ ô
ši { | gf gm gu⁰ ô o gn² np² x² u t| k c p²r lcpvknwu
u| gtgvg⁰

Tqnqpc c u| w^a ppcm o gtv hck Cdfwn J co kf
n² p{ckv n² v^a m hngv² i n² f o c u| w^a p n² t^a pvugo
euwrc tqnqpk u| gtgvgd n pgo ku Q| o^a p rcuc pci {
o n² mc k^a pv xcn» vku vngvd n n² ngk c o ci c n² eu/
l^a dc c r n² xpck qtqu| n² p⁰ L>| cpcdd qnc xcp gttg⁰
Dk^a qp{qucp wf lc. j qi { co n² | Q| o^a p xgrg xcp. pkpeu
c| c| g² xvgo gf gw o gt² p{ n U| vco dwdcp. cnk dqo /
d^a v f qdpc c u| w^a pk j kv»dc⁰ O ci c c p²r v² r p² u² /
lgnqwc j gn{ u| p² gp⁰

G² tv v^a pvgw nk wtc c x² p. o qi qtxc. dgvgi gu
n² vq^a v c ngj gv n² i ngx² ud² pgnk xcn»^a n² ucn c rc/
n² vco ctucm^a i i c⁰ G² tv ngm Q| o^a p rcu^a pcm nkxq/
pwpkc o kpf gp u| gn² o rntc. cmqt ku. j c i {^{3/4}tk c|
cu| vo c. cmqt ku. j c n² qn{cp gn xgu| kuqn² r² g dclc⁰

I j^a | k Q| o^a p pgo vgo gw wf xctqpepcm² u c|
² xgm pgo vgw² m ugo uko^a dd^a c o qf qt^a v. ugo l²/
n² pngdd² c vgo² u| gv² v⁰ C| ctc{qu j kv»m o² n² p

eugxgi ul wñ³pk f^ao^am h²ri o quqn{qi xc. h²ri ul 3/4/
p{Āñ³4xg uwwqi l^am gi {o^aupcm jqi { o c ku dgl^a/
tewc rcmq³l^av Cdfwn Jco kf ul^atp{ugi²flg gn w
2u nk³gpv jqi { o gi h²|qw n³4 3/4 2u pgo xqpw nk
f³u|j³kw³dcp. o²i jc c Uj gl³p xku|k ku gn c| gi²ul
d^ao²ul nqf³» rgtgr ww{q³0

C ul^atp{ugi²f vgt²ul²gvugp pgo o gtv g|gn
c lgrgp²ugk xku|cv²tpk c i c|f^al^aj q|0 Hqto^arku gt /
ulcm²n n³p{ul²g³wgw c n²r wuv c| clw³p{k³utc. c|/
w³p dgeu³4v³gw c| 3/4gi Āt j^an³u|qd^al^adc 2u
o ci c j^aw nk c| ^ai {d³n cfvc t^a c twj^akw o gtv c
ul qn^am pgo o gtv²m n³4grf pk c j³kw³gn³ dgvi /
j g|0

O quv j^av qw Āñ ul wñ³pk p^aul w^axen ul go dgp.
f w^aucp 2u gmgu²gtgf gwgp⁰ K pñ³pv n³4 3/4 2uk tqj co
t^a||c o gi = c ul wñ³p t²ul vgx 2p eu³x^arlc o gi hgl²v
2u ul g²gv²gn n³p^arlc c o ci c ctc³{ ewn³u³n³uf qdq/
|^ad³nc ul cm k³nq³0

C i {qtucp gnw³cp³» ul wñ³pk hqi cv w³p c rc/
mqv³ku| v³lgn m n²vpc³ku| v³m h o²n³u³i qm 3/4 gi g
j c r f v i {cm³ qucp⁰ U t h²rc³pm| dcp⁰ J qu| Ā n³m
n²d^av³n³q³ ctc³{j³o³|2u lgr³k t³pi l²w³0 X²i gr³v
j cv³rc³ o gpg²dgp n³4x³gm c n³q³ew³ ukv u r²r²ugn³/
ngn c| qp²dcp o²i ³i { ku o gu³g gm ctc³f³pc³m c n³q³ew³
o 3/4 3/4w³ c| ³i { n³gr³w³ gw t²uv c v³uv tu²i qu| vci ck
ul^an^amo gi 0

C j³»h³j²t o qu² ngung³{ r²reu h²rl^at³lc gn w
o gi v³tr³cp³cm c rgl³x³cm 2u o gi^an³pc³m o k³y³c o^at/
x^ap{d³n h²ci³v³m xq³pc nk ng³0 C n³q³ew³ o gm n r³/
wi t³km c r²n³l 2u o²n³gp o gi j³cl³q³rc o ³o gr³k o k³y³c
ugi ³gpg w^apc³m c r³u^an³u^adcp⁰ C x³n³u^ai dcp c| qp/
dcp pgo ul cdc³c P ci {Āt v³u²j g| j q| |^a2tpk³0

C vgo r³mqo h²nr³wlc nk³tw³0 J cto k³pe r³c
ko^av 2pgm j³cpi lc |Āo o 3/4 2upgm j³cm³u|qw k^aki
c dgl^atv n²r w o 3/4 Āk o quv j³ct³p{ n²t²pgm³ gt /
u³4kn⁰ C o k³pctgv v³gl²p o gi lgr³pk³m c o Āg| k³ 2u
qw h³pp c ul²f³o ci cudcp. c j^avdqt|qpi c³w³cp c³r/
euq³{ 2u x²n³q³{ nku xcut^aeu o 3/4 3/4w²i pgm v³tv n³/
tq³m³ k³vq^arlc ô šC³m³j kn C³m³j j³cm O wj co gf

tcu| wn Wmcj ô ô šGi { c| Kvgp² u Oqj co gf c| rt»/
l² v³ lc0

O clf hgrj cpi | km c| gn ¶^a uqu. go r² ng| vgv hki { gn
o gl vgv² u<

ô šO ci twrpo c# Rcf kucj ko uk f gp dÃ{Ãm Cn/
rcj pct#0 ..Rcf kucj 0 pg r² i { dÃu| ng# Cmcj pci { qdd.
o kpv#0

C u| wn³ p o gi^a m gi { rgtetg0 C nk^a n^a u gn² n² u
c j clmqv^a v² pci {Ãt hgrm gi { c ncp{ctqf».. ngungp{
r² reu p c ner wki 0 Gn v² h o² n² u^a i qm gl Ãuv² r² n² v.
hÃuv² n² ngi { u| gtgnv xku| pgn0 C hgu| Ãnu² i o quv hgn/
gpi gf0 C| qf c^a n² qw nku u| wn³ ph² eunc gff ki ugo
xgv² ng c u| go² v cr² t»r0 O quv. j qi { c u| wn³ p gr² dg
² tv. c nku j gtegi nkxqv. rlek nku netf² xcn u| cd^a n² q/
ucp vku| vgrj 0 Kvgpgo . o gpp{kv n² p² f j cvqw c r cmv/
rctndcp c nku gl tgf gu. co ¶^a i gl v c o q| f wvqv o gi/
v p wnc#

C vku| vgrj² u w³ p ô o kpf gpt n o gi hgrf ng| xg.
j cpi qucp gmæci lc o ci^a v² fgur lc hgr² c nkuk² 0 C
u| wn³ p. u| kp² p xk^a o cp. gm quqn{ qf km² u gw n c
o quqn{ i^a u»n gi { u| gttg go dgtk². o² i tqnqpu| gp/
xgu² ku ngu| ctec0 C| qpdc c nku j gtegi gpi gf gm gu.
n² agrgu² i wf» nku {gtgm ô u|² r gp qwo ctf v c j g/
n² p^a nxc. eucm cte^a xcn² u vgnkpv² xgn n² tk t^a xku| /
u| co quqn{ i » cr lc Ãl^a v0 C u| wn³ p o^a t gn ku v pv c
dgeuwm^a f» vgo r nqo clv» o^{3/4} 3/4 0 Dgpv o² i gt ugd/
dgp hgn gpi c|² pgm² u c| Kvgpvku| vgrvgo gi ng| f f kn0

Qf cnkpv r gf ki o gi rc| wn c hgi { grgo 0 C nevq^a m
n² p{ gm gu r kj gpldg j gn{ gl ngf pgm pgxvi² r² u. o q| /
i^a u ng| f f kn0 u| kpv. j co k² cvrcp ngrgk n² r dqp/
vnu| km kv nk0 C vku| vkm euqr qtvqndc xgt f xg eki c/
tgw² te i {Ãvpcm xci { c r wdikno dcp^a mf qi^a n» r qn/
i^a tk kuo gt ugkmgn grgi { gf pgm dgu² ni gv² udg0 C ne/
vq^a m uqthrcck n² 3/4 v ô gr² i o grgi xcp ô^a tÃuqm
v ppgm hgn j u² v nko qp^a f² xcn^a ux^a p{ x² | gn u^{3/4} dgv/
vgr0 O kpf gpnk gu| km ku| km ki c| i cdc twj^a l^a v. hgi { /
xgt| gv² v0 C j^a vcvqv hg| nevq^a m » xcvqcp gn tg/
p{Ãvqw p{cmn ku|^a m c pctcpeuu^{3/4} r^{3/4} 0 C uqtqm
ku nku² hndqo rcpn0 C m² 3/4 f k Ãl^a i ¶^a » npcm m² 3/4
p^{3/4} ug p gi { |^{3/4} f twj^a u hxcv n p² i gt v plm hgn c uqm n² 4 v.

cnk o kpf gpl²ng dcmw^tuqmmen ²u hkpvtqmmen j¹klc
hgnoc i^atc c hki {gr^o gv^o}

M⁴dgp. dgpv c o qu²dcp. o^at lex^adcp hqn¹km c|
Kv^gpv^ul vgrv^o C u|gr^ao rkm o kpf ki xgp^f²i hqi cf^auucn
xcp gi {dgn²⁴xg^o C o gi j¹kw o w|w^oa p gn ngn u²/
i gm ²u c n²⁴xgv²i gm^ancn cl^aprqw m²⁴⁴f lgm o^at
qw i {²ngngl vgm c vgo rmo o cn ³⁴u|g²r¹kw rcrqc
u|crpl^adcp^o Kicvqw u^atp{ugi²f gm ²u nco ct^auqm
hwnqupcm p²xuqtqmmen c ngl¹Andgp. gi {km go dgtv n
c o^aukni ²u vppgm gn c rcrqc vgo gldgp. tgpfg|pk
kphqto^apk c xgp^f²i ugtgi gv^o C xgp^f²i gm u^ao^atc
i c|fci d²⁴⁴v. ²f gu²i gngv. hngvgn¹x²v n²u|¹wgv c
u|w^apk i c|f c^o

H²ntc o^anc c u|w^ap o c i c ku o gi lgrgpkm xgp/
f²i gk gn w^o O kpf³⁴u|g p²j^ap{ u|²v x^anv c nk²⁴⁴v^gv/
vgnmgn c|^vp grkqpw^o Mkv c| wfxtqp. c vgo rmo k
u|gtvt^vu w^ap c rxcnev n²⁴dgp o^at dghqi^vm c
j^atgo j k²⁴⁴ndc^o C u|w^apk wfxt gi { t²u|g o^at
xku|c ku kpf w^o C eu^au^at eucm egtg w^ap hqi xku|/
u|c²tpkr crq^vl^adc^o

Co kn¹gp App²n¹gu. tgpfg|gw c o gpgv qf ch²r².
qt{cp ³⁴u|g/xku|c hguv k tgpfgv²u²i dgp ³⁴⁴prkm
xku|c c eu^au^atk o gpgv^o C u|w^ap xku| ch²r² o^au
nqeukp u|qnqw o gppk= tgpfgv²u²i c p²j ck qu^am¹
o ci {ct v²⁴⁴n²⁴u. Tw²qth h j gtegi^ancn pgncl^ap/
f²n¹q|qw n²⁴pp{ nqeukp^o P²j c o c i c j clv. fg o quc/
p^adcp eucm c dgu¹ A²ut r^o Hgj²tngu|v¹ u nku ngl g
ngo²p{gp pgn¹gu¹ A²n c i {grⁿ pgn^o I j^a|k Q|o^ap rcuc
o^at pkpeu xgrg= j cvcm cu hgi²t r¹xqp ngm c| ³⁴gi/
A²pcm c nqeuk w^ap A²gpk^o O quv qn¹cp lgrgpgv n²⁴
xgvngl km co gn¹gv c m²⁴⁴f lgm co¹ pgo n¹w^am
pgo j kpp²m gn ugn¹pgn= c rcu^am¹ v¹dqtpqnm¹ ô
rgf ki cki xcp n²⁴v¹m o^a|u^ap^an n²⁴pp{gdd ô hww/
r²udgp u|crf pcm i {qtu u|w¹qi^auucn c u|w^apk
nqeuk w^ap^o O w²v^ai qu n²r< c rcu^am c nkm qf c j c|c
c hv ldg u|gtgnv t²|vctw²dc v²xg qrxcu^am c rcrqnev
o gtv o²i c rcr¹v ku n²v^am vctv¹pk o quv qw n¹q¹/
pcm netlcknev o guu|g gn tg vctxc. ut v³^o gi dgp
c p²j^ap{ rtkxk¹ki k^anv r¹xcu n²⁴v. l>h¹to^ap²rgwg/
u²n¹ n²⁴gr gwg ô ²u uk vctf¹ek² u|gtkv ki {gngl pgm

c ul w^ap n^aeukl^a pcm ngtgngk^v o gi n>f¹cpk⁰ J qi {
šugi ¹u²m hgn²i g o gpgv² v⁰ Ugpnk ugo p²gxgv gl gp<
¹ { Ākm ukul qn¹u⁰

C n^aeuk qw uwj cp c o²i o kpf ki uqthcnv^a m[»]
n^avq^a m n¹/₄ v⁰ F g co gttg c ul w^ap o^at grj cmfv c
uqthcn t³/₄ kfgugp hgn¹ul rkn⁰ C n^avq^a m ul cmco /nk^a n¹/
v¹uc grj cmw⁰ C| kn¹gpnqt xgl²p{gnv šlqddtc p²||ō
K⁰ Xkn⁰ qu p²o gv eu^aul^at n^apuvcp¹kp^ar qn¹k n¹qi cv^a/
u^apcm go r²ng⁰ Gmqt xgl gw²m dg gl v c xgl²p{ul^a»v⁰
ô O quv o gpgv¹ul n¹r hgn¹ f km² u c n¹r t^a | cvqu n¹q/
o^au n^aucp gnv pkm c o gn²mwe^a n¹dcp⁰ P go uqn¹tc
r gf ki o gi v¹rgm l¹tcfv n¹qo qn¹ v¹/₄³/₄m n¹i²p{gmmgn
c| Ātugp^a u¹q|^a» n^amcp{^a n⁰

C n¹/₄ ³/₄u²i ku qu¹ rkm ô tgpfgv¹g¹Ān n^axcti^a»/
ucp. euqfc jc ul gtgpeu² v¹g¹u²i pgo v¹/₄ v² pkm o kpf gp
cm^anc⁰ o c¹0 U^a l^a v^a» uwj cpeqm euk^a pcm o ci w^apcm
wcv n¹v n¹/₄ p{³/₄ m¹gk= c d²tn^aeukm² u o^au l^ato xgm
i c| fci v¹/₄³/₄m² u ³/₄ o² p{ ngtgungf n¹pgm h¹qi cvk
co gn¹ p¹gm Ār¹u²t n r¹reu l²t n v¹g¹l²t n p²| v²m wc/
uckm c pci { f¹ul h¹gn¹qpw¹uv dg² n¹gn f¹pgm c i {c¹qi/
l^at^a»m u t uqtc¹dc⁰ Quv¹tr cv¹qi cv¹u. nk^a n¹q|^a u. c
n^aeukl^a n^aev ngtgu p²| m ul qn¹^a k^a pcm h¹Āw¹ g¹vi g¹v²ug.
o gr¹i² u n^axcti^a». xcn¹». n¹/₄ ³/₄ v¹ rqt⁰ O kpf ki gl
c ul g¹ o rkm¹ d¹gh¹gl² ug⁰

C ul w^ap xkn¹ o ugdgu h¹qi cvc n¹/₄ dgp o^at t²i gp
dgu^a i w¹f qw c r¹cn¹vc. n¹r w^a p⁰ C| t²i xli {^a|| dc
h¹gu Ān o cl¹ r kj gpldg rpn¹cf⁰

C ul w^ap v¹to gk¹pgm dgl^a tv^a p^an qw^a m ul go² n¹k
vkn¹tc⁰ D^at o q| f w¹vc¹pw¹ x^atv² u o quv ku eucm c ul q/
n¹q w n^auc⁰ o² n¹ o gi j cl¹ ucn Āf x³/₄ rk w^av ô i {qtu
o q| f w¹cv n^a v¹pdgp pgo ku v¹p^a euqu. jc pgo x^a i {c/
n¹q| km gi { grj k¹ v¹g¹pn¹gf gw ul w^ap k t¹gxq¹g¹tr¹/₄ k² utg
ô . fg Cdf wn J co k² r¹gu ul go g l¹n n¹ v¹c. j qi { h¹q/
v¹qj ¹g xcp⁰

Āv. j qi { dgu² r¹ g⁰

C vkn¹ t Ātc o gi j cl¹q⁰

ô Hgn²i. co ¹ Hgn²i gf c ul g¹ o rkn¹ v¹pv¹gw
nk n¹i o ci cucdd l¹gr¹p¹ v² xgn i {^a ul qu j ¹ t² n¹gl gw c
r cn¹ v¹ dc⁰

C u| wñ³p nñ²tf rgi p²| c vknñ²ttc0 C| jcmep
hqn{vc|c0

ô C xg|²tmet o quv nkngt^ñ 2xhqñ{co^a pcm
o clfpgo ³4u| gu vku| v²v gñqi v³m o gi pgo gpi gfgw
u| gtxg| ngf²u o kw0 O ci c K o ckn r cuc rgi {gro gu/
u²i g hqi cwc r g c vku| vgnv0 T k c r cuc gzegngpek²lc
o^at lgrgpvng| gw u| kp²p cwf kgpek²tc0 Ngi cñ| cvq/
ucdd lgrgp²uvku p{ Ævqwdg0

C vknñ²t o quv nku u| Æpgvgv vctv0 C u| wñ³p kp<
eucm hqn{vcuuc0 U| gtgk c t³4kf. v³0 ³4 tghgt^af^anev0
C vknñ²t hqn{vc|c ku0

ô C r cuc gzegngpek²lc c| v o qpf|c. K o ckn
r cuc rgi {gro gu²i g c| wfv p²mñ hqi cwc r g c
vku| vgnv0 U| gtlpv g c x^af crr vcrp0 C vku| vgm v²p{/
rgi plpeugpgm ku dgkuo gt²udgp²u vcp^ñ ukpeugpgm d /
p u²i Æng. ô c| gi { K o ckn r cuc u|^atp{ugi²fgv
nkx²xg0

C eu^au|^at o quvnñ²tf g| gn u| ³4<

ô J^ap{ vku| vt nxc p u| »A

U|^ao^atc pgo Æ c| kn{gp gugv0

C vknñ²t rgj qti cu| vc hgl²v0

ô O clfpgo c| gi²u| ²xhqñ{co t>n eu^au|^atk hgn/
u²i0 T k c r cuc o qpf|c ku. j qi { gpp{k xg|²tmetk vku| /
vgv. euwc vgi gw²i gu²u nñr| gw l²thk. pgo ku rgj gv
^amco²tf gn00

CdfwnJ co kf kpv0

ô L>0 J ci {f0 Vg dct^avc xci { T k c r cu^a/
pcm o kA

C u|^atp{ugi²f o quv o²i o gn{gddtg u^ñk r kn/
rcpv³u^av0

ô K gpku. hgn²i0 Xcnc knqt o ci co ku vcp^ñ/
x^ap{c xqnc o c r cu^apcn0

J cix^ap{ o quqn{ xqpwn x²i ki Cdfwn J co kf qrc/
dctpc cte^ap0 C x³4³utghgugv. j gi {gu u| cñ^am nku²
o gi tgo gi 0

C u| wñ³p o^at kpf vndgn vgt o gkhr²0

ô O clf o gi p²| go c| kcvqnev0 Vcñ^ap ki c| c xep
T k c r cu^apcn0 P go ngm^ai { Æxcn n pk xgtgdngt g00
O clf nknñ²f l^ñm xcrcj qx^a. l> o gu| g c| qnev c
kcvqnev0 Lch^adc. Vch^adc. F co cu| mvu| dc0 P go

d p^{3/4} m gl gm eucm hcvcmn⁰⁰ M^t xqpc c| gi²u|
 2xhq{co²t⁰ C| v³p o gi r¹vwm jqi { x^arpm dg c l^{3/4}
 x dgp ⁰⁰⁰O^aulgrgpv^gpkcn>f pkpeuA

ô Pkpeu. eu^au^atk hgn²i# ô x^ailc 3/4u|g c v^k/
 n¹t c dqm¹l^a 0

KO Cdf vn J co kf. c x^{3/4}3/4u| u| w³p d>rkpv gi {gv
 2u grkpf vn dgru u| qd^ak hgn²0 C hcvn vku| vgm pgo pc/
 i {qp²tf gmkn⁰ Fg uqug dcl. i qpf qdc. jc c xgl²p{n
 v³dqtpqnm h²n²ngp{gm gi {o^aut⁰ Cmm^t ngi c¹dd
 u| go o gn vct¹a m gi {o^au r²ugkv²u pgo gum¹u| pgm
 3/4u|g v^{3/4}x²p{gu wwm gn^gp⁰ ¶| { pgj gl gp v^{3/4}j gv nk
 ncvpck rweu⁰ C| ^amco eu¹p{gnv ô gl v w¹lc c rcfk
 ucj ô uqj cugo c hcvn u^a| cfquqm euk^ar^a m jc/
 pgo c dghn^auqu i gpgt^akuqn⁰ Ngi c¹dd ku ¶| { xqrv
 gl o kpf ki V^{3/4}3/4m¹u^a i dcp⁰

C šx^{3/4}3/4u| u| w³pō c| qpdc p gl cm¹mo o cn v²xg/
 fgw⁰ Pgo w¹lc. jqi { rkm¹pcv{ k gpi gf²ngp{u²/
 i²xgn gi²u| j²u^a|²xgu fkc¹u| v¹lc u¹u^al^apcm
 ngi {gm gl gwo gi 0

XKOU^a o /gv²udgp⁰

O wu| vhc Mgo^anv vj^av u^ao | v²m ô fg hgl²v
 pgo xgw²m ugo hqi j^a| dc pgo euwn^an⁰ G| gn u| go /
 dgp qn{cp gugo²p{gm v^{3/4}v²p²m xgrg c n^{3/4}xgvng| j >/
 perqndcp. co gn{gm eucnku V^{3/4}3/4m¹u^a i dcp²u ugj qk
 o^auwwugo v^{3/4}v²pj gwgm¹xqpc o gi 0

O kku v^{3/4}v²p^vA

Gi { hcvn xgl²tnetk vku| vgv u^ao | pgn⁰ Gtg c
 hcvn vku| v. n²v kf gi gp qtu^a i qp ngtgu| v¹n gi {u| g/
 t gp o gi u| 3/4nkm u^ao | g²u²d r⁰ U 3/4n²u²v c| qpdc
 pgo xgu| km²u| tg⁰ Krgwg. o kg²u| tgxgu| km o^at o g/
 i kpv xku| cu| 3/4nkn⁰ M^{3/4}dgp c| qpdc o^at kuo²v gi {
 uqt qtu^a i jcv²t^ap lwwq o^at ngtgu| v¹n⁰ C| v³p c
 xqrv u^ao | 3/4v t²u| v¹gu| gi { qn{cp jcf¹tcv¹dc.
 cjqx^a ugpnk ugo m¹fv¹g ô²u gdd n c nertk¹knwu
 dcm¹t^au|uqtq| cvd>n c hcvn xgl²tnetkpcm x²i An ô
 ugo o k dclc ugo ngu| 0 U v. c ngi hgn¹ dd jcf¹At. c eu^a/
 u^at o²i o gi ku f¹ku²tk gl w³p²u x²i An ku jkcvcm/

ucp ku qf c j gn{g|k c j qx^a wælf qpn² r r gp lwpk cmætv
 2 u c j qx^a o gi u| 3/4 3/4 < c u| gtxg| ngf hlÀ 3/4 3/4 m hqt/
 tcf cmqo ngm u n² 4 gr² dg#

P qu. n² uuwneucmuqt^{1a} dcp0

O kw² p O wu| vhc Mgo^a pcm ugo hgl² v pgo xgv
 v² m ugo hgi {j^a|tc pgo ¶² n² m u v o² i eucm jcf/
 d¶² » u^a i gr² ugo^a n¶² qw^a m eu^a u^a tk tgpfgwgnc dk/
 tqf cmqo v² xqrk u| ¶² lck eu^a eun² dg. Fco cu| mwu| dc
 u^a o | v² n0 K² v c| w² p c xk^a i qp ugnkpgm ugo^a tv
 j c0 C v² xqrk qtu^a i t² u| gndgp wi {cp pkpeugpgm 3/4 u|
 u| ggum^a x n0 U v0 K² v dk qp{^a tc ki gp fgtgnæucp hqi
 xkugmgf pk c u^a o | 3/4 w ô i qpf qn² m Mqpuvcpk/
 p^a r qn{ dcp ô . j qi { j c| cv² t² u² v nkgu| n² 4 3/4 ng0

O wu| vhc Mgo^a n² nævqpc n¶² t² gwgn xkw² m c
 d³ 4 3/4 p egm^a l^a d» n c nqpuvcpk^a r qn{k tcmf » r ctvtc0
 K² v o^a t x^a tv c j cl». co gn{ grkxg v² xqrk e² ric hgr² 0
 C| ci i » f » 2 fgucp{c. cnk h^a pcm xk^a u^a i ræx hqi u^a i^a /
 t» n 2 tvgu^a n. c| qppcn hgnw| qw Mqpuvcpk^a r qn{ dc.
 j qi { hc ugi ¶² u² i² tg ngi {gp0 C| qp dcp \ wdgk c J cpw/
 o qv o² i eucm hc n² 4 gr² dg ugo gpi gf v² n0 Gi {gwgp
 u| » v ugo x^a nj cvqwi {gto gn² xgn0 O quv ku. co knqt c
 hcvn xg| 2 tnetk u^a | cf quv u| wtqp{qu t³ m n¶² t² v² m
 c j cl»^a m qo^a utc. c| 3/4 xgi { 2 fgucp{c eucm o guu| kt n
 n¶² t² j gwg gi {gwgp h^a v c j cl» j ¶² ki 0 O² i eucm 3/4 u| g
 ugo p² | j gwgn0 G| v ku dk qp{^a tc xcno k À cdd 3/4 u| g/
 gum^a x² u lgr² pgm hqi j cw^a m xqpc hgn c n¶² t fgvgn^a
 ¶² xgn0

O wu| vhc Mgo^a itc c j cl» hgf² n² gv² p ku gt ugp
 xki {^a | vcn0 C n² 4 dggu^a m qo^a uqnu² pgo gpi gf v² m
 nku^a npl0 U v o² i c j cl» j ¶² n² 4 gr² dgp ugo xqrv u| c/
 def o gppk0 C j cl» gn pci {qdd^a m qo^a uc Dg{twj
 xqn0 Kppgp o^a t pkpeu o guu| g Fco cu| mwu|. À lwm
 x² i e² ric0 U ¶² hc m^a n² 4 pdgp c xk^a i ngi vto² ngp{gdd
 qtu^a i c. c| 2 i j clæv o qpf j cvpk gw» r ck² u ¶² { c v^a /
 xqn^a i qp n¶² x^a n c xk^a i qp ugo o k ugo go r² mg| vj gwg
 c j cl» hgf² n² gv² p Æ f 3/4 2 n² u c v^a xqrv n² o rgn xg| 2 t/
 netku^a | cf quvctc. j qi { u^a o | gv² udg² tng| kn0

(0) Fco cu| mw| dep. gddgp c| ut²i k Qo cll^af/
 x^atqudep c nqto^ap{| »p^an nngw lgrpvg| plg O wu| /
 vhc Mgo^apcn0 C nqto^ap{| » o²i c t²i k šÀkō v³/₄
 t³m xk¹i gi {km xku| co ctefv f¹u| r²r^ap{c xqn0 Dc/
 t^aw^ai qu. ngf xgu go dgt. cnk o kpv o ci c Mgo^an ¹lc.
 per qvc. crki gi {/n²v »t^av v³/₄n³/₄v gn c jkxcvncu
 fqicxcr0 Cpp^an u| ¹kgugddgp hqi rcmu| qw c| qp/
 dep j^atgo j³/₄i {gkxgn²u c jcu^axcr0 Go gngw pg/
 jqi { c| v jki {l¹m jqi { tqu| wn nqto^ap{q| v xqpc
 U ¹l^a0 Gmgpm| rgi 0 Uko w²nq|. p{wi qfv o qfqt^a/
 xcn o²i c rgi mw|^add Āi {gngv ku l>n gn wf^ac kpv²| pl0
 Gi {²dn²pv U ¹l^av pgo ku pci {qp nngw šnqto^a/
 p{q| pl00 G| c i c| fci. ²r²pm ngtgungf gm k hqi cm Ā
 vctqo^ap{. pgo eucm ³/₄po ci^av vctqvc gn jcpgo c
 eu^au^atkdkqfcmo gi {kmh cp{ci k^vo cu| c ku rgw0

Grkpv² pgo ku xqv uqm fqic O wu| vhc Mgo^an
 pcn0 Mxgl²p{gn²m j qm k n¹| cf» jgi {k v³/₄| ugm o gi /
 l²ngl²u²tg ô fg gl gm c šeuc^vnō j Āu| ²u jcto kpe
 t²u| vgx xgn ô tgpfgugp u²t²Ā²ugm p²m²n d^at pci {
 r wun¹|^au^acn²u n²/₄x³/₄f³/₄²u^agn o gpygm x²i dg0 U ¹l^a/
 dep o²i o kpfki ²ngm c| C²cu/U w³p jgi {k v³/₄| u/
 h p³m euc¹fl^apcm n¹| qpi » v¹lck cnkmpgm kf pn²pv
 gu Āndg lwqw jqi { m ft¹ Ā hglf gm gm pgo r gfk
 c v^axrk²u o gi hqi jcv^arp u| vco dwk rcfkucj crw/
 xcn0 K{gpmt c| v³p c o quq¹i »u u| ¹lck nqto^ap{| »
 o²i ku eucm šo gi hqi jcv^ax^aō vgw gn w¹m c rcfkucj
 r²vg²u²v ô ²u p²j^ap{ h¹evn gt²n{gu vku| v rctepu/
 pqm^aic crw^am» m²/₄p¹o²p{v m²/₄v³/₄v c v³/₄| uh /
 p³/₄m¹ o gi l²ngl²u²tg0 Tgpfu| gtlpv gpp{k gr²i ku xqn0
 J c c detpc rglrxenp Āi gv rxcu| cnu| o gi lg/
 rpv xcn0 gn km u| ¹lck x^at dgl^atcv hgr² xgl gv jg/
 i {k ³/₄x²p{gp. c v³/₄| uh p³/₄m¹ o^at o gi ku lw^au| qf/
 cm²u h²t² |^au| n>xen hqi cf^am p{kqw x^atner wcn
 c rcfkucj šn²/₄gvkō0

K{gp jcf¹tevndep xgw t²u| v O wu| vhc Mgo^an
 u^a| cfqu ku0 C| qpedp p{wi jcv^arp²u uqntcx^ai »
 vto²u| gv²v pgo gr²i ¹j gw²m nk c fco cu| mw| k gurk
 x^aeuqt^am kvqw xk²nk hgi {xgtnerpfqmen vct/
 n¹xc0 L>n wf^ac. jqi { Cdfwn J co kf dwn¹u^av²u c
 hqttefcm cv gn ugi ¹v vku| w^atuckpcm | ³/₄g c ngtgu| /

v̂p{r̄mc Dcm̄pqp a m̄o a uq| km cj qn c| gr̄i gf gv̄gp/
 ūi c o qj co gf^ap r cf kucj k^apv co Ìi {ku c| gr̄p{q/
 o qw ngtgu| v̂p{ pgo | gvm vcf ¶ek̄l^ax^a x^am̄0 O wu| /
 vhc Mgo^an o kpf gp x^ai {c c| xqn. j qi { xkuu| cmgt. Ìn̄
 j guugp ô j c o^at M̄pucp^alp^ar qn{t>n pgo ku r̄gj gv
 u| » ô . r̄gi cr̄i dd u| Ìn̄ x^atq^adc. U| cm̄pkn̄kdg0 G e²ric
 2tf gr̄i dgp c| w̄p o kpf gp n̄xgv o gi ku o q| i cv̄w0
 J c xcrc̄o gn{km dclv̄tuc u| qi^arc̄vk Ìtc kpf w̄v O ceg/
 f>tkdc. c n̄m̄u| go u|^a| cf qu hgn̄v̄gp Ìn̄ u| gt²v gl/
 v̄w̄g. j qi { c dclv̄tuv kpf w̄i uc gn w o gi n̄tlg< xk/
 i {gp o ci^axcn dk̄cm̄ cu r̄xgr̄ngv qwcpk dca^ackp̄cm
 K̄guo k̄j g| c r̄quc pgo xqn̄gr̄i o gi d̄j| j c̄w0

C j k^adxc̄n̄ r̄xgr̄g|²upgm c| qp̄dcp pgo uqm
 gtgf o²p{g xqn̄0 Gttg o gt²u| r̄r²utg j cv̄tq| v̄c gn
 o ci^av O wu| vhc Mgo^an̄ n̄tx²p{v ¶v o ci^apc̄m
 U Ìnk̄ r̄cu^apc̄m c u| cm̄pkn̄k r̄ctcpeupqm̄ v̄dq̄tpqm̄
 pc̄n̄0 C v̄dq̄tpqm̄ h̄ttcf̄cm̄^at j ¶dgp^am̄w0 M̄tx²/
 p{²dgp O wu| vhc Mgo^an gn cf v̄c u|^ao | gv̄u²pgm
 qn̄v²u cttc j k̄cv̄u| qw. j qi { u| cm̄pkn̄k u| Ìgv̄u
 r̄x²p. ki gp l>n kuo gtk c n̄4p{²ngv. qw u| gtgv̄g u| qn̄/
 i^arc̄qv v̄r̄iḡu| ¶gp̄k²u qf̄cx̄n̄ dgqu| v̄uv n̄t0 Cttc
 n̄tv̄g c r̄cu^av̄c j cuuqp qf̄c c u| w̄n̄^apk w̄f̄xctdcp. j qi {
 u|^ao | gv̄u²v h̄gr̄if̄l^am²u xkuu| cgpi gf l²m u| Ìn̄ /
 k̄4f l²tg0

C r̄cuc r̄gtu| g pgo x^arc̄u| qn̄0 G| ki gp²tj gv
 ku ô j ku| gp eucm pgo j Ìj cv̄qw p{ ¶nc̄p w̄lc̄v eu^a/
 u|^atk w̄t^ax̄c̄n̄0 Cpp^an pci {qdd xqn̄ c r̄cuc o gi r̄gr̄g/
 v̄ug. co kn̄t p²j^ap{ j²v o Ìkc. gi { pcr̄u Ìv̄²ugu f²n̄
 gn v̄p̄ cf l̄w̄^apuc dgl̄r̄gp̄k p^arc̄ ô O wu| vhc Mgo^an
 Fco cu| m̄w̄u| dcp u| qn̄^an̄ eu^au|^atk xgl²t̄n̄tk u|^a| c/
 f̄qu0

O wu| vhc Mgo^an dgr̄r̄gw²u²r̄²pm̄ ci i>f> j cp/
 i qp gn cf v̄c c v̄dq̄tpqm̄pc̄m j qi { o gi n̄r̄v̄c c|²tv̄g/
 u|²uv̄c v̄dq̄tpqm̄ô j ¶k̄v̄c v̄#

U Ìnk̄ r̄cuc ki gp gr̄euqf^am̄u| qw0 M̄dgr̄gp̄v̄w̄g.
 j qi { pgo j ¶k̄v̄c. fg pgo ku j ¶k̄vj̄c̄v̄c c u|^a| cf qu
 w̄c̄v̄0 K̄v̄ xcrc̄o k v̄xgf²u xcp0 Fg. j c o^at kw xcp.
 ki {gn̄|²m̄ j qi { o gpv̄ n j co ct^add xkuu| clw̄uqp c
 j gn̄ tu²i²j g|. o gtv̄ gpi gf²n̄{p²m̄ Ìk̄ gn̄^axq|^au^ad>n̄ c
 r̄gi pci {qdd nḡmgo gw̄gp̄u²i g r̄gj gv̄0

O wu| vhc Mgo^a n c| qpdcp cfvc c|^a tvcvcp0 C| v
 x^a ru| qnc< Fco cu| mwu| we^a kp gi { kuo gtgvvp l² thk
 e² f w¹ v eugo r² u| gw c ng|² dg. co gn{ dgp gl^a m< šL34/
 l3p c| qppen U| cmppknkdg00 Gttg o gt² u| ngf gw gn² xq| /
 pk ô gi {² dn² pv u| qn^a r^a vk wc|^a u ĀĀi {g crw. Fc/
 o cu| mwu| d»r0 Ekktvj^a dcp Gi {kr vqo qp² u I 3/4 3/4 /
 qtul^a i qp^a v l3/4 v c Dcm¹ ptc0 C| v rgtu| g pgo o qpfvc
 gn c² v² dqtppnpcm jqi { vku w² tuck ¶i { c lchck jgn/
 tu² i rctcpeupqnc. Ām²4 dgp v²4dj gn Āw i qpf qu/
 nqf vcm ctt»n jqi { j c n²4 dgp t^a l3/4 pp² pgm Fco cu| /
 mwu| dcp kn² v² mgrgp gnwc|^a u^a tc. kf dgp² tv² u¹ ¶j gu/
 u² m jqi { o² i xku| c² tj gugp0

C fco cu| mwu| k e² f wr tgl² v n{ gu v²4 v² pgv² t n o c
 ugo wf wpm d xgddg0 G| ku co c v² p{ gm gi { kn².
 co gn{ gnldgp euw^a p Mgo^a n gn cf^a u^a tc xci { wpm
 wcrk0 J qi {² u o kv v²4 v² pv gl c tgl² v n{ gu e² f wr/
^a cf^a u. xqrv/g gi {^a nci² p UĀntk r cu^a pcm xci { c|
 gn² i gf gvvp vku v² nctpcm xcrc0 k u| gtrg gddgp c j ku/
 w² tk dcp ô c| verki j cpgo 3/4 3/4 antgl² v n{ hqi lc hgf pk0

Cm² tj qi { ku v²4 v² pv. O wu| vhc Mgo^a n u|^a | cf qu
 o quv o^a t kw^a m euc^a fqw cteen U| cmppknkdgp. u| Ān /
 x^a tq^a dcp. UĀntk r euc² v² dqtppm gn w0 UĀntk r gf ki t³/₄
 xkf Āqp j c| cm² f v²0 L» ku ngppg ukv² p o gtv j ku| gp c|
 wc|^a u o^a t l» r^a t pcrqv xgw ki² p{ dg0 Pgo wf pk
 j qi { Cejo gf dgl tpci { . c lchck jgn{ tu² i dca^a vk
 rctcpeupqnc o² i vx^a dd ku gn wf lc j kv² p c fc/
 o cu| mwu| k nqto^a p{ | » xcn jqi { c u|^a | cf qu Lchc
 n²4 p{² n² p vct»| nqf kn0 ô Oc. c t^a f k² »² u c netv² v/
 ngm xk² i^a dcp gi { kn{ gp u|³/₄ n² u xcn» dcp pgj gl gp
 n² r | gnj gv gn0 Kc|. j qi { wi { cpcedcp c| kf dgp P²/
 o gvtu|^a i dcp xci { Cpi r² dcp ugo xqrv gm² r | gnj gv
 gi { xgl² tnetk vku v. cnk kn{ gp 3/4 p² p{ gugg gnwc| km
^a nqo^a u j gn² t n *Eucnu* V³/₄ 3/4 nqtu|^a i dcp² u *eucnu*
 Cdf wn J co kf dwn² u^a v o gi gn | . wqn». | t| cxctqu
² xgnldgp v²4 v² pj gwgmkn{ gp šeuqf^a n00

O wu| vhc Mgo^a n c| qpdcp. o kw² p Lch² d»n c xg/
 u|² n{ gug² v² tg o gi dgu|² nv u² i 3/4 p{ eucm pgo l3/4 v.
 lqi i cn j k j gw. j qi { u|³/₄ n² u² v o² i pgo xgw² m² u| tg0
 ¶i { gnj c² tq| vc. j c o^a t U| cmppknkdgp xcp. ngi cif dd
 o gi n² qi cvlc i { gto gm² q^a pcm u| ¶j gn{² v0 P² j^a p{

d²n²u per qv v^{3/4}w 2fgucp{l^axcn o gi kuo gtngf km c|
^amco hqtf w^av^c n²u| Ñn u| cm^apknk^a vku| vgn^agn cnkm
 n²4^{3/4}w uqm t²i k dci^alc 2u kum^arc^atuc ku rgu| dk q/
 p{l^atc0

L> p²j^ap{ per ki o ctefv vj^av U| cm^apkndgp0 Dg/
 nx^at²n{q| v^c o ci^av 2fgucp{lc r^an^au^adc ô c| kf u
 j^{3/4}i { gi {²dn²pv o clfpgo nk^at>rci c| | cn v^{3/4}nk per/
 lckv. jqi { 2²r^apn^agp ci i>fkm h^c0 l^{3/4}k lg h^argw0 O ci c
 O wu| vhc Mgo^an lgi {gl v^agn jqi { 2fgucp{l^axcn uqm
 xk²lc 2u m^apd^{3/4}2ug o gt^anv h^angddgp c| kf dgp0

C| 2fgucp{c 2u h^a n²4^{3/4}wk gm^agp²v^agm c| qpdc^a
 pgo eum r^ark^ank^a 2u xk^ai p²| g^ak qn^ack xqncn0 C i {gt/
 o gm^aqtc go r^angk o k^apv w^alwm o k^apf ki ku c| 2fguc^ac/
 j q| j^a ð^am c h^a u| k^a2v0 \ wdglc J cpwo pcm n^aq| gt/
 xc^ak 2u o ctefv k h^aq^auc kf gi gp xqnv c pci {tcv^{3/4}
 h^cven l²thk gn w0 M²rgl v^a n²4^{3/4}wm c| gm^agp²v^agv gi {
 x^atcv^ap. fg 2²rr qn{ jktv^agn²i i gn ku dghgl| f^{3/4}w
 gugo 2p{0 O²i O wu| vhc n^av^apc^akn^ark 2xg c^aw
 wi {cpku x^atcv^ap t^{3/4}kf r^ax²n w^afcw U| cm^apknd n
 O wu| v^alc^axcn 2fgucp{lc l²tlj g| h^aqi o gppk o^auqf/
 u| qt ku. c h^cven Oqterk Tci kdj q|. cnk^a O wu| vhc o²i
 U| cm^apknd>nt²i >w kuo gt0

Oqterk Tci kd. gl c o qtgek u^ato c|^au^a h^cven/
 go dgt. gi²u| n²v^agzku| v^apek^al^axcn 2u gr^avj wv r²/
 p{l²xgn^ancpf> dgvi gungf²u²xgn pgo xqnv O wu| vhc
 p{l²tg0 Gi {^ancf^ap 2²vj v^agv^agp xqnv u^ao^atc gl c|
 gi²u| o^auqf km j^a| cu^ai 0 C| v h^cven h^al²xgn o²i pgo
 2²v^agv o gi < 2fgucp{l^apcm pgo pci {qp xqnv o^at
 x^an^aq^acpk xcn>lc c l²thkndcp0 X^allq. co knqt n²u
 l²thknt^adcp c| gi {nqt^a O wu| vhc n^afgw ku h^cven
 p dg u| gtgv d^arg. gu²dg lwqwg. o kn^agp u| ki qt^acp
 v²nv n^av^apc^akn^au^a. v^arcu| v^arcv^ap h^al²xgn 2fgucp{lc
 n²ugk^au| c h^argwA

Co knqt c|^ap c| gun^ax o gi v^{3/4}v²pv ô t^{3/4}kf
 kf o Ñ^axc dg ku n²4^{3/4}wngl gw c n^av^au| t>hc0 C o^a/
 uqf km l²tl wi {cpku gi²u| gp t^{3/4}kf j^a| cu^ai
 w²p u^añ{qu v^a i {w^arc^auv n^arcqw 2u o gi j^acn. \ w/
 dgfc J cpwo r^agfi qw^am^aw. cjqn c| gnu j^a| cu^ai c
 w²p ô c| | cn c m^apd²i i gn jqi { o quv o^at n²v

ul gtgugp xqiv ¾ xgi {0 ô G| c| kpvgto gl| q ku gm²/
n{¶gwgc p{c² u hĀn³4 vc| gmgp^v vġ0

Mgo^a n² fgucp{lc j ktvrgp o gi ¾ gi gf gw. o^a uq/
f km h²tlg j cñ² n² w² p² u dgvi gungf pk ngl fġw0 P go
xqiv o^a t nkp² gm vġu| gplġ0 U| go gxk² i c ku^a mcpf»cp
i {gpi Ān0 P gj g| gp² n² v h²tlg w² p o ctfv j ci {c/
v² m h²ti cv² u² d»n ô² u co knqt n² wc. j qi { h²c. c
dk² vqu o gi² n² j gv² uv² n² xgl e² u² |^a tk xgl² tnetk u² | c/
fqu. h²ttcf cm cuckv l^a u² km o kpf gp x² tg c hgl² dg
u² |^a m< j qi { ku j ¶kj cvc nk xcen² c uqtuqv gpp{ktg
o ci c gmgp#

C| qp wqnu» go n² ngl gv² u² lu| cnetk dgu² n² i gv² u
gn w. co gn{t n o ci c O wu| vhc Mgo^a n go n² ngl km
o gi. c h²vcn u² | cfqu o gi kpv² fgucp{lc j^a |^a dcp
v² ti {cnv o quv. u| cm² pknk n² v² i cv² uc cmem^a xcn euw/
nq² w cl»m o ¾ ¾ ¾ u² | ggumĀx vku² w² tuckxer0 C hgn/
u| qn^a n» u| qdcñ p{ lgrgpvgw c|^a i {dcp hgnx ¾ gi/
cuu| qp{pcm j qi { c h²vcnĀt. Āi {n² u² km o gi kpv
tquu| dcp v² 4 j gk c hgl² v0 Det^a vck xep² pcm p^a n² u c|
cu| vcn² v² n² r gm² u uqm r² p| j gxgt0 Fg c h²vcn² tem
pgo n² tv^a | pcm pgo | gp² rpgm pgo ku ku| pcm² u o² i
eucm pgo ku p nt n dgu² rpgn0 v ku nk² n² v² m co kpv
hgn| qn^a n² c xceut^a v0 O wu| vhc Mgo^a n o ci c
o qpf lc gn<o k² v² v² pvgl w² p0

ô | fgucp{^a o n² ucp² u j cmep hgn» xcn² f qw c
n² reu p0 Gi { kf gki j emi c»f| qw c| cl» gn w² u c|/
w² p xkuu| co gpv c u| qd^a l^a dc0 O kw² p dcl^v tucko o cn
dk² qp{qu o gi^a n² r r qf^a uqntc l² wqwwpm² u c| qm gm gp/
vgm² r r r gp^a i {dc cnetvco hgn² f pk co knqt² fg/
cp{^a o x^a tcv² pwn dgr² r gw0 šHlco ô o qpf qwc ô
u| gtgv² m xcno kv o gi wf pk v rġf0 Xcn» dcp hgn cnet/
vqm n² | cfpk c rcf k² j gmgp. cnkp² gm j² v u| gpv j c/
vno c cfcvqwĀō | fgucp{^a o pcm gffki ugo o kv
ugo^a twnc² gn c vkn² qu v² ti {cñ ucko t»f0 O quv c| qp/
dcp o^a t pgo vctvq² u| Ām² i gupgm j qi { v/
x^a ddtc ku gnkn² r lco 0 šK gp. ² fgucp{^a o ô x^a n² u| qn²
vco ô c|. c h² tik Cdf wn J co kf. cnkp² gm< c u| gpv² m
j² u| gtgu j cvm^a v wwl² f qp¶qf. c xcn² u² i dcp o^a t
v² j gvgv² p0 Gn cnetlwm xgppk j cvm^a v² u c| qtu^a i qv
ku o gi cnetlwm v rġ u| cdcf ¶cpk0 Vg o^a u xk² i dcp

2nu| 2u vñp pgo ku wfu| dgpp²pmv o gi 2tvgp⁰ Fg
c| 2tvdk qp{^atc pgo cnetu| wwpndc^a npl⁰⁰

ī { hqn{ vlc<

ô | fgucp{^ao n̄i u| 3/4p{ dd ci i qfcm ckv n̄v
vc dgdk qp{quqf p⁰ L>kf gli vctvq. o ŋi ku²v o c/
i^aj q| v̄tv⁰ C| w̄p ŋi { u| »n< šC| v j ku| go ugo o kv
ugo hqi vqm wfpk gr̄tp⁰ C dcnkngt c xcn̄u| ŋp dd ô
uclpqu uqmn̄ xcn̄u| ŋp dd ô 2u c| w̄p vg xci { c|
gi { gv̄p hco ô pgo cnetrcm̄²i gf ku gr̄gu| ŋgp⁰

(00) O wu| vhc Mgo^an c| qpdc pgo j clm̄w 2fgu/
cp{lc u| cx^atc⁰ C o²i uqñ ki gr̄p{²lu| cnek dg/
u| 2ñi gv̄uv o ci c lgi { gl vg h̄n⁰ Oc o^at Mgo^an g xcn̄
n̄o^au^v gi { gu d²na²k i { cp²xcn̄ kngv̄n̄ x^allqp pgo
rtqr ci cpfce²n̄nev u| qñi^an̄/g gl c ft^aock r̄g²u^a kuA
C| 2tv. j qi { o gi o wcuuc c xkñi pcm j qi { o²i c
n̄i ft^ai^a dden c| 2fgucp{^axcn̄ u| go dgp ku o gi xcn̄u| ŋ
vqc pci { e²m̄k | 2ugk⁰ ô /C x^arcu| gi { u| gt < c
xcn̄u| ŋp u²i co gngw u| »n j qi { kn̄ gp dg^am̄²uv gr̄
ngp²i gk hqi j cv̄pcm Mgo^artc⁰ Gi 2u| gp dk qp{qu. j qi {
cmt. qw U| cn̄pkn̄dgp 2fgucp{^{1a}xcn̄ xcn̄dcp xqñcm
n̄o qñ gngp²vgk c h̄vcn u|^a| cfqupcn⁰ C| qpdc r̄g/
j gw²i gu. j qi { O wu| vhc Mgo^an gmt. j Au| gi { p²/
j^ap{²xgu n̄t^adcp. vñp pgo qñ{cp j c²tq| qw u| c/
xcn̄v j cu| p^an̄ 2fgucp{^{1a}xcn̄ u| go dgp. co kn̄ gpngv
c| gugo 2p{ gmw̄n̄i qu dgn̄²kgv̄ng| 2ug w̄p r̄g²u⁰

X²i ãn o²i ku gn n̄ngw j ci { plc O wu| vhc Mgo^an/
pcm U| cn̄pkn̄⁰ C tgwgi gw u²i 3/4p{ x^atcv̄pwn o gi /
2tng| gw< gn̄ xq|^auc Fco cu| nwu| dcp nk̄wf »f qw 2u
»tk^aukdq^ap{ xcp n̄ngv̄ng| dgp⁰

Gttg n̄r v̄gm o quv cnek̄dc c| gn tg n̄hgm̄gvw
v̄kn̄qu j w| cn̄n⁰ J k̄dc. V^{3/4}3/4n̄tu|^ai gmt o^at cñ xqñ
^auxc c h̄ttcfcm̄o u|^ao^atc⁰ U²ñtk r̄cuc cf lw̄^apuc
M̄pucp^ar qñ{d»n gñqi c»r ctepeuqv n̄r< c h̄vcn
u|^a| cfquv c| qppen vctv̄| vcuuc r̄g⁰ C l>lpf w̄v^a
u|^atp{ugi 2f c| qpdc k̄gl²dgp u| »n̄ dcl²tu^apcn⁰
O wu| vhc Mgo^an o quv uqtdcp h̄mf vc c| gn tg o gi /
dgu²n̄ tglv̄gr̄gu v̄xk̄cv̄n̄⁰ C| qppen ãpcm lpf w̄v
2u gi 2u| gp t³k̄k̄ k̄ c̄rw lch̄^adc 2tng| gw. cj qñ dc/

t^avc. Cejo gf dgl. c rctcpeupqm» tpci { cii »f»
 ul go tgi^a p{^a uqm n hqi cf v0 Gm qpf qvc. jqi { c
 Owul vhc Mgo^a n v ngtgugv rctcpeuqntc gffki o²i
 pgo x^arcu| qn0 Fg o quv o^at rgi h dd kf glg. jqi { c
 ul^a| cfqu o gi² tng| gw. o gtv c x^arcu| cf^auv vx^add
 pgo j Æ j cvlc0 Oquv r gfk i c| v cl^a pnc < wc| |²m Owul /
 vhc Mgo^a n Dkt U²d^adc. c U { pck/h² n| ki gvtg. cj qn
 3/4 pnt pvgu vku vgnl n^a m» eucr cv n³/4 v³m c lchck j gn /
 tu²i vci lck ku. c| cpi qm n n dg pgo xcmjw nkuj^a /
 dqt Æ dcp^a mpcn0 C| cpi qm n c| c n dck nk³/4 v x²f /
 v²m c dgppu Æ³/4 vgm pgx²dgp. c p²xrgi gu Æ. c v³/4³m
 gmgp0 P { { n v j cdqo »n o kpf c n²v h²n h²n v²u gl²tv
 eucm pgo j kxcv mqu. ngr ngl gw euc^v tq|^a uqm hqn vcm
 Dkt U gd^a p^a n²u Cn d^a p^a n o gn { pgm hqn { co^a p o kpf
 n²v ul go dgp^a m» h²n o kpf gp gtl²xgn c| qp xqm. jqi {
 o gi ul gt| gw r q| { k² l^a v o gi vctj cuuc. Cn d c| cp /
 i qm n p c m c|²tv xq n hqpvqu. o gtv gl c nk³/4 Ct^a dk^a /
 pcm gi { km n w euc0 V³/4³ nqtul^a i xku qp v l»n w f v. jqi {
 c| co Æ i { ku v³/4 gf gl dkt qf cm qo gl v c hqpvqu x^a /
 tquv pgo gpi gf j gk^a v c n²| cf » v³/4 | ugn p gm²u c o³/4
 i³/4 v³m^a m» cpi qm n p c n0 { | o qt | uq n » f qw ng c n³/4 gn
 o Æ dcp o^at pgo gi { j cv³ tvctv qo^a p { c V³/4³m
 Dkt qf cm qo t » n0

Cejo gf dgl²u Owul vhc Mgo^a n o gi gi { gl /
 vgm cddcp. jqi { c rctcpeupqm gl v hqi lc x^arcu| qpk
 Mqpuvcp v p^a r qn { dc < c x^a m cm q | » ul gmgo hcvn
 ul^a| cfqu² rrgp c|²tv. jqi { tqul o k p u² ug hgn /
 lcx² u^a tc² tf go gmgv ul gtgl | gp. Ich² d » n 3/4 pnt pv c|
 Cn d c htq p t c v³ xq | qw. jqi { c hgmgn v³/4 ugm n³/4
 vgn² dgp j cteqr lqp c rcerkucj dkt qf cm^a pcm vt Æ v k
² r u² i²² tv. ô Cejo gf dgl tpci { r gfk i pgnk gttg gp /
 i gf² n v cf qw0 Owul vhc ngo^a n vj^a v Æ p c m ku kpf w w
 Cn d^a dc0

C| gi²u| qr gtgwul gt . kf g/qf c wc| i cv³u o gi ng /
 j gv ugp hcpvcul v m w u c o ck go dgt ul go²dgp. xku qp v
 ki gp l gm go | c| cm qtk v³/4³m^a ncr qv qntc0 Gi { hc /
 v n ul^a| cfqu hrgv g u gk v c| qtt^a p^a n hqi xc xgl gv k = gi { /
 ul gt gp Æ i { wc| i cv U { k² d » n I³/4³ qtu^a i dc. I³/4
 t³/4 qtu^a i d » n Gi { k r qo dc. Gi { k r qo d » n Ct^a dk^a dc.

cj qi { ucl^a v Ætk nřp {g/ngf xg vctvqc0 Kk gp nř^a mc/
r qvqm o gmgw. j c c j cf ugtgi hgi {gro g ku o^at gp {/
p {kg o gi rc | wv. c | ¾u | gqo ř u p c m u | Æm² i u | gt gp
dg ngmgwnř^akgvng | plg0

C | ¾u | gqo ř u dg ku nř^akgvng | km t³kkf guggp0 C
xkn^a o qm o^at qw ekn^a | vem c dqt Æu v³4³4^m 2 i dqrv hg/
ngw0 K0 Cdf wn J co kf. c x³4³4^u u | wn^a p. gi² u | nqt/
o^a p { | cvk tgp f u | gtg h³4³4^w Gmqt o^at U cmppknkdgp
nko qpf qw^a mc j cñ ř u ¶² rgv0

C hcvn xg |² tnetk u |^a | cfqu vj^a v gi {gn tg d^a p/
w eř u p² m^a Æ Æu | c o gi n e r p f qu u | ¾³4³ u² v0 U v0 Co k
nqt c rgi nř^a gngddk gn ř r v g² uk dgcf x^a p { qnev ¶¹ a m c
nqpuvcp^a r qn { k u | gtcu | hgt^a wudcp. c j cf Æ | o k
plu | v² tkwo dcp. c u | kp² p uqtqp nř^akgvng | O wu | vhc
Mgo^a n u |^a | cfqu. o^a uqf tpci i {^a vgtlgul wkn hgn o gtv
Cn e d^a dcp ¾ p nř^a p v g u x^a n c m u |^a u c u q t^a p x c n d c p d^a v
tcp² u j u k g u p x k u g m g f g w0 Rctcpeupqnek c rgi /
u | gdd r g ¶¹ a u q n e v m Æ f k m h g n M q p u v c p^a r q n { d c 0 C |
^a n c ř i p q u j g n { | g v k u n g f x g | = C n e d c o g i o c t e f v c
v³4³4^m n g |² d g p. c j q n r g f k i i { | g r g o x c p. q w x c p
n k v p v g² u k u 0 F g v ř i p² r r g p g | c n q p h k m w u n g w c |
gi { km nř^a x g v g p q n e c p p c m j q i { C d f w n J c o k f v t p /
l^a v t³4³ k f g u g p o² i k u g r x g u | v g w 0 J c p k p e u g | c x² n g v
n g p c n e d c k j c v² t l p e k f g p u. O w u | v h c M g o^a n u |^a | c f q u /
p c m p g o c f c v k m o g i g | c | g i { g v g p n g j g w² i g u n k /
d Æ x ». g m q t o^at v t j g v g v g p j g n { | g v² d g p < C e j o g f
d g l t p c i { . c l e h t c k r c t c p e u p q m p g o w f l c d e t^a v^a v
o g i o g p v g p k 0 C r g v t w | v v² u k r c t c p e u p c m g r i g v n g n
n g w x q p c v g p p k g. O w u | v h c M g o^a n c x k u u | c g u d /
p³4^v. n g h q n q |^a m d³4³4^p d g |^a t l^a m v ř i p n k k u x² i | k m
ô² u o k p f c | . c o k c | p g x² j g | h | f k m c v³4³4^m v³4 /
v² p g r g o d g p. v ř i p g i² u | g p o^a u h q t f w e v q v x g w x q p c 0

∞ i { c | q p d c p C d f w n J c o k f o^a u q f u | q t g p /
i g f k n k n e t o c k d » n c | k u o g t g v g p x g |² t n e t k u |^a | c f q u v
ô² u g | g n c ř r² u² x g n M g o^a n v² u c | ¾ u | g g u n Æ x n g v
v ř i p o c i c k u u k g w g v g. j q i { c n e k l w n e v k o o^at o g p /
v n j c o c t e d d o g i n g | f l² n 0 O g t v c j q i { O w u | v h c M g /
o^a n u |^a | c f q u g n g p p g o t² i g r h q i c w » r c t c p e u q v c f v e m
n k M q p u v c p^a r q n { d c p. 2 r r g p Æ | { d^a t o g n { k n Æ m p { c /
m^a v u | g i j g k o^at » n j q p c r t c c e u^a u^a t k v k n q u t g p f /

tu²i 0 Mqpuvcp^ar qn{ wf lc. j qi { ¾u| ggum^Åx m^Å
ngno quvo^at pgo ngj gvt²l^a rpk0

U| cm^apk^akdgp. c| ¾u| ggum^Åx²u u| ¶pj gn²p grj cv^a/
tq| v^am j qi { o quvo^at i { qtucp eugrgmf pk hqi pcn0

XKOC hqttefcmqo 0

Pkc| k dgl. c v^¾4^¾m j cfugtgi tpci {c. nempf qu/
o À^aÀ l^athk^À Pci {u| gt gp²tk c dcpf^acj cteqv< gi²u|
2rg^vdgp dcpf^am gmgp m^Åf^¾4w c tgi wf^atku j cfugtgi
u| qri^arv^adcp0 Kuo gtk o »f u| gtgkngv. d^Àx»j gn^agkngv.
j cteo qf qtwnv. ukngtgkm vkn^av0 Gi { h^¾4^¾4vugl^axgn
v^¾4^vpv j gxgu ¾u| gv |²u w^ap gi {u| gttg qvj ci {lc
O qpcu| vt o gmgw hgnx . o cegf »pkck j gn^a tu²i²v.
Tg| p^av²u dgxgu k o ci^av c x^atqu h^¾4^¾4w go gmgf .
l^atj cvvcp u| kn^acj gi {gn^adg0 3; 2: /dcp nk^a| k c h^ang/
r^au m^adqi »l^av0 U^ao qu j ¶xg²u dcl^atuc eucv^anu| km
j q| |^a0

C| À l^a r^a| cf »nev c u| cm^apk^akk j cto cf km u^ao À
j cfv^auv xg|²tnet^apcm gi {km vku| vg. Gpxgt dgl. c r q/
tqu| i^atf^ap^an nk^ar| gw v^¾4^¾4m xg|²tnetk tpci { xg/
| g^a0 O qpcu| v^aw^an o quv²u| cntc²u f²rtg ku nk^¾4 c
hqttefcmqo 0 C | kf k^adgp c| qpdep pgo k^agf p^agm o gi
v^an^ai qucp< pgo qn^acp o gi rgr f q^ani. | uq^arl^aknv
c nev^ap^am uqj c tgp^af guggp o gi pgo ner l^am c| w^aqu»
k^adgp²u pgo gi {u| gt tgp^af g| v^am j q^ao k nk^agdd n/
u^atp{c^an^a| cf^au⁰ Cdf vn J co kf. c x^¾4^¾4u u| w^ap. pgo
d^aplc= lqdd ¶i {< o quv ngi c^add p{¶ncp o gi o wcv^au/
| km c hqttefcmqo 0 C| gff ki u^¾4^vvdgp rer r cpi » vkn^aqu
xg| gv mgn ng ngj gv o clf u^ao q^apk0 Hqpv^aqu. j qi { gt²/
n^agu²u o gi d¶j cv» go dgt ng|²dg ngt^aÁ^¾4p c tgp^af/
euk^an» j cv^amqo 0 C two²rkck h rctcpeupqm c rkdgt^a/
rkupcm kuo gtv. u| cn^ancrp. dgtgw^anctc^À J wu| gk^ap
J kno k r cuc v^adqtpqm j gn^agw Ugo | k r cu^av. c| gt²n^agu.
n^op²rgv^app go dgt j ¶²dgp^am» i gpgt^arkuv d¶|^am o gi
c tgp^af euk^an^au^aer0 Ugo | k r cuc xq^apxtc Á⁰ Ngw^ac| km
2u o gi²tng| km O qpcu| v^adc0 C| qppcn c h v²tgp r^ax
r quc^am^aqo^aut^a ukv. j qi { c u| w^ap p^apcm u^Ài^¾4p{¾/4/
|¾4p0 C| gnu h^aven vku| v. cnk À^adc ngt^aÁ^a ci {q^ar^¾4k

lʔp{gu perrcn c rquc^a nqo^a u gn w0 Mvqpcv| vgm
 2u nʔ4 nʔi 2p{gm^a npcm c vʔtgp. p{wi qf vcp fqi^a p{q|/
 pcn0 Gi {km ugo go grk c nkuwl^a v ugo c u| gtgpeu² vgp
 Ugo | kr cuc x² f gm² tg0

C nqen^v v grkxgvw² n0 C o gt² p{rgtg² u| dgner/
 pcm c [kf k| dgp ku0 O gi rt>d^a npcm gi { o^a ukm i gpgt^a /
 rkuv rgn² f gpk< gl ku o ci cutepi À nevqpcv| v. O Ækt
 Q| o^a p c vʔ4³ m j cf ugtgi vʔ dqtpei {c0 G| v ku rgnʔ4 kn0
 C u| w² p o quv o^a t gn xgu| k nʔi o gi d² j cv>dd go dg/
 tgl0 Tgpf n² k Æk o gi j cvm c|^a uqmmen fg o quv o^a t
 vnk² v n{gu nevqpc k hgf gl gwgn ucl^a v h cf lw² pu^a v
 P c| ko dglv m² f k rē O qpcu| v² dc0 P c| ko dgl. c| ce² n'
 go dgt. pgo x² i tgp f gm| km o kgn w Æpcn² kpf w0
 gn | k o gi c hgmgn nʔv0 L>hqt o^a p nk ugo u|^a m c xq/
 pcv>n o^a tku j cto kpep{qre 3/4 u| ggum² x nevqpc/
 vku| vpgm nʔm c u| w² pj eucrcvqm i rʔf^a l^a dc^a npl0
 Hqi qn{ nʔpv kpf wpcm c| qppcn Mqpuvcp² k^a rqn{ hʔiʔ0
 P c| ko eucm w² pwm wc| km gr0 C r^a n{cwf xctqp i q/
 n{>v nerqw ku. fg pgo ugdgu² v o gi nqo qn{cp0 C
 u| w² p qwj qp t² u| rvgu lgrp² uv ner c f qni qm nq/
 o qn{^a n² u^a t>f0

Crki j qi { P c| ko dgl h cf lw² pu nkswg c r² d^a v
 O qpcu| v² d n Ætc h² n² | cf v c u| qo u|² f qu x^a tqum
 gi² u| uqtc0 Gi² u| Vj t^a ek² u Ftk^a rqn{. c š o^a uqf km
 h x^a tqũ ku. hqtqpi0 C nqto^a p{j eucrcvqm pgo
 cnetpcm c hgmgn dcl^v tuente n pl0 U² i 3/p { u² i 3/p {
 w² p o gi { c [kf k| dg< vgp k nʔm xcrcv kv. m² f pdgp
 kv c x² i # O kpf gl p² j^a p{ j² v crw l^a u| >f km rē0 X² i tg
 U o k^a dcp štgf kō. xci {ku vʔ4³ m o q| rko |^a u| n/
 crlcnev xqppem 3/4 u| g² u tempem j cl>ntc< c xcuert
 o gi kpf w0 C j cl>tc c| qdcp rcrpcm ngtgungf pgm
 3/4 n² 4 xg. kl Æ vʔ4³ m vku| vgm ku hreugo r² u| v² m o ci w
 nev0 | u o k^a g c eucrcvqm U| cm² kndg² tpgm² u rctvc/
 u^a n² p² cm o^a t i { | 3/4 v c r² | cf>m vknqu rtqrci cp/
 f^a lc< c tgf kh eucrcvqm gi {u| gt gp qf c^a npcm c hgn/
 ngn m o gn²0 Gttg l^a rkuw 44/2 p c| kl Æ vʔ4³ n² 4 m Tg| pc
 x^a tq^a dcp nkn^a n^a m j qi { c j cvm cv^a v gu| km² u
 nqto^a p{vrcn² | pcn0

O^a upcr c nqpuvcp² k^a rqn{k pci {xg|² t. Fco cf
 Hgtk² r cuc. K0 Cdf wn J co kf o^a ukm u>i qtc ô Cpi /

rk^a dcp hgrp w u^o co qfqtÀ go dgt ô tgpfn^lArk r²/
 r²utg u^aplc gn o ci^av0 T^adgu²rk c u^lwn^apv. j^lklqp
 3/4u^lg c| qppcn gi { f kx^ap/l²r²v. qn^lcv. o kpv c t²i k v³/
 t³m pci { wtcnu^f»n0 C| wqn»²xk^lgf gm 3/4u^lgu^an^l
 rco l²thck o kpkul vgtgm pci { n³kgvm v³dqtpqnu^m
 o gi j^lx^auv n²rvc m c [kfk^ldg0 C u^lwn^ap o ci c pgo
 o wcvnu^lkm gi { h³Åi i 3/p { o 3/4 3/w jcmi cvlc vcp^aeu/
 nu^l^auwne^v0

C f kx^ap vcp^aeunu^lkm ô²u Oceg^f»pkc wi { cpc|/
 per c hgmgn m ngl²tg lw0 C| gi²u^l n^l|cf^au grkpf^l«lc
 Pkc|k dgl. rcwqi ». xk^ao | gpgu^l» o gmgw xqpw n dg
 vku^lw³tuckcn gl gtp{k h²g²thgl gu hgmgn nevpc²r²p
 Oqpcu^lvt dc0 Mlj kfgvk c| cmu^ov^ap { ô o k^lgp
 p²r u^lgt u^l» gl cmu^ltkdcp# ô xku^lc^an^lu^av0 J w
 u^lqpgi { gv n pgm c| 3/4gi. crki Å go n²r gu dcm^lpk v³/
 t³m^ai { Ån0 U cmu^lpkndgp. c vctvo^ap { k h x^atqudep.
 o kpf gp l²p²u j^a| hcrp wi { cpc| per tgi ign qw h³Åi i
 c| cmu^ov^ap { xku^lc^an^lu^apcm nkj kfg^vug0 C o²i
 o kpf ki kpi cf q| ». n³gng^u²i wf » tgp^f tv³/p³m co k^l
 nu^l o gi n^ll²trk c rtqmco^aek^v gm²xq^lcpk i qn^l»v
 ner0 C p²r c| we^atc 3/4 3/prk^c c vku^lv²m r²v^ant»n
 u^l²ngm v²gl²t n gtn²n^lgn^l n dgu^l²f gm^v k^v| pgm c
 p²r j gl 0 W^l { cpg| v³4v²pkm c v³4dk v³4³m hppj cw^u^ai
 crw^am» Dcm^lpx^atqudep ku0 C u^lwn^ap «^l»cu^lvr^ltc
 r gfk^l qf cvgu^lkm c ..tg| pcknu^o^ap { ð u³Åi i 3/p {²v

*Hgn²i # O²n^l vku^lv²rgwgn n²tlÅm^a n^luc jgr^ltg
 eu^lu^atk tgp^fgrwgn xku^l/cxq^pj cvwvcpwn c| cmu^ov
 o^ap { v o kpf c/q^p p²r gm u^ao^atc. co gr^lgm Hgn²i gf
 crwxcn⁰ J ku^l Hgn²i gf pgm c| cmu^ov^ap { v gi { u^l/gt
 o^at²ngvdn²r v²gpk ku o²n»/wvq⁰ M²tlÅm o kpf gl v
 j qi { j u²i Åpm²u gpi gf grv gu²i Åpm pg gu²m n^ll²t/
 v²udg0 Co gpp { kdgp c/q^pdcp Hgn²i gf j^atqo per
 cLw xcu^ltpcrki. c rctrcogpv o gi p { k²u^lt »n u^l»⁰
 eu^lu^atk h²to^apv pgo cflc nk q^lcp gugo²p { gm n^l/
 xgng/pgm dg. co gr^lgm p { kx^apxc⁰cp Hgn²i gf cnc/
 tcw gngp²tg ngu^l/pgn# Gttg o kpf c| 3/4u^l/gu. o kpf gp
 tgp^f²u tcpi Å rqi^atk vku^l/xkugⁿ m o kpf c nevpy/
 vku^l/v²m²u n³4rgi²p { gm u^l»xcn c| gi²u^l pgo | gv. xcn^l
 »utck h^ltc. v²tucfcw^lk^an^lutc. xci { qu^lv²r^ltc xq/*

pcwq/» mĀn/pdu²i p²mĀn Kāgp gn w gi {o^au^{cn} u/3/4
xgu²i dgp n³4grg/xg²t/kno ci wncvō

Fco cf Hgtkf rcuc pci {xgl²t gm gi { c rcu/ v²dc0 Ngo qpf0 Mkggpk jqi { pgo x^amcic c hgn u/ u²i gv0 C u| w^ap nkgxgl k gi {nqt k vkn^at^av c. pci {/ jvcw Ā^amco xgl gv²udg o^at dgrgcpwv U| ckf rcu^av pci {xgl²tpgn0 U| ckf o kpf gp^atp p²mĀn³4jgvwpp² cnetlc o ci^av vppk c| cpp{k^c »j clvq w²u x²itg gr²tv rgi o ci cudd^a m^audcp0 O kpf n²v k^ap {dcp qtkgp/ v²n²f km o kpf gp^atp gnko ¶cpk c hqttefcw cv ô gl c lgn| »0 C f k^apv c| qppen u²ipgm gtgu vkn0 C| qt/ u^ai 3/4u| gu v²xk »ft »v lcp hwpcm u²llgn c O qtug/ lgh »m^c c eu^au^at jgn {tg^an ¶qvc c| cmqvo^ap {v0 U| c/ nppkndgp. c vctvo^ap {k h x^atqudep. guv »tk^auk p²r/ Āppgr²n {v vctvpcn0 C nkxk^ai ¶qvw x^atqu h vt²p. gi { p {qo qt Ā^ai qu. xk²nk gi {go grgvu u^am gtn²/ n²p. ^ampcm c v³4 gi gn w c hqttefcw xgl gv k0 C j qvgn pci { | qn » pgxg šQn {o rqu Rcregō. c hgn^au crcw nku v²dī m šGnu tgpf dclqt u³4³nō. o gi šF k/ kpi Tqqo ō0 C o kpf 3/4u| g j wu| qpp²i { ²xgu n²| cf / v²tuxgl²t. Gpxgt tpci {. pci { dgu²fgv kpv²| c v³4 o gi j gl 0 šGi {gn u²i. vguv²tk²i # O kpf gi {. jqi { o qu²dc l^at/g xcrcnk xci { dc| kkn^adc. o kpf gi {. jqi { i 3/4³4. dqn^at. ngtgu v²p {. v³4³m o qj co gf^ap/g xc/ rcnk gi { hqto c h^c c j^a|^apcn²ō ô c| Āppgr²n {gu u| cmppkknk guv j ug0 | rr dg cnetlc hgl| pk dgu²f²v. co knqt j^aw n c| gtn²n {clwdep. o q| i qn^af^au v²o cf 0 Xcwo k mĀf³4pe l³4w²u uĀi 3/4p {v j q| 0 C| clw²j q| rgi / n³4 grgdd. hcvn xgl²tmetk cn tpci { ^am^c O wu| vhc Mgo^ar0 C hcvn vku| v pgo t²i ²tngl gw U| cmppkndg0 C nk³4 hqttefcw j ¶²tg ukv gw kf g0 xgu| k o quv^a v c uĀi 3/4p {v0 O ci c dqv²lc hgn gn²rcuuc²u gl w^ap o quq²qi xc p { Ā^avc^a v Gpxgt pgn0 C h nqt o^ap { | » v²xkvc^c c u| w^ap cmqvo^ap {xku| c^an ¶ » tgpf grv²/ pgn vrdgu. j krgu nupvcp^ar qn {k u| 3/4gi²xgr0 Gp/ xgt^a vhwlc c| kcvq. o clf net^axcn eugpf gv kpv0 C v³4 gi. qw rpv grj emi cv0 Gpxgt o quv j cpi qu u| »xcn hgn²rcuuc c eu^au^at Ā^a gpg²v0 Htgp²knw² rldgl²u v³4 hgn o gi kpv0 C v²peqn. wllqi ». vĀp {qo »t²u v

ngtgu| v̄p{ v̄/0 gi 2ngvk Gpxgtv. cnkv l»ci c lwvc/
v̄wj cv̄r̄qo j q| 2u c u| wv̄³pv cnkcm̄qvo ^ap{vcf qw0

C v̄/0 gi eucm̄tgi i ghr̄ḡ? v̄t pci {pgi gl gp cm̄f pl0
C| we^am o²i n̄ŕu j clpc̄ndcp ku v̄gr̄g xc̄ppcm̄ j cpi qu
go dgteuqr qt̄v̄m̄er̄f0

Mgo ^an c h̄lvcn cn tpci { ku gr̄f̄i gf̄gw̄gp v̄t
p{w̄i qx»tc tgi i ghr̄ḡ?0 Ugv̄²i g pgo xqrv j k̄ dxc̄x̄c̄»
pgo o c̄tcf v̄rg c h̄ttcf cm̄o qo p̄kdw̄l ^at»r̄f0

O^aupcr ô 2rr r²pvgnk per. u| gr̄co r̄km xcp ô c|
gi²u| qtu|^ai n̄q̄n̄f̄f̄^am̄en xq̄pwn c| we^atc0 C h̄ttc/
f̄cm̄o i {qtu ulngtg r̄gi lq̄ddcp c o cegf»pk̄ck v̄ku| v̄g/
ngv r̄gr̄v̄g o gi 0 C u| wv̄³p w̄i {cpku i qpf qucp gr̄kv/
n̄q̄nc c| v c| qn̄qv. co gn{ dgj »f̄q̄f̄^aut̄c n̄ŕp{u| gt̄^alḡw̄g0
Gi { t³k̄k̄f̄ v̄³xk̄cv xqrv c| qm̄c c h x^atqu n̄v̄q̄pck r̄c/
t̄c̄peupq̄n̄i p̄cm lgr̄gp²v̄ug. x^arcu| vn gi { o^aukm v̄³x/
k̄cvc0 O k̄gn w̄i {cpku J co k̄f c| cm̄qvo ^ap{ xkuu| c/
^an̄f̄^au³j q| o gi cf̄vc xq̄pc c| gpi gf²n̄²v̄ gzrt̄guu|/
u³Āi 3/4{v̄ l̄p²| gw̄ c Dcm̄³p/h̄gr̄? gu gt̄ f̄³ndgp ^am̄/

o^auq| » u| v̄o dw̄k n̄v̄q̄pcu^ai h r̄ct̄c̄peupq̄n̄j q|. Eucv̄r̄f̄| u^adc0 O gi w̄f̄p^a/g x²f̄gpk c h x^atquv gi {
gugv̄gi gu n̄| cf̄ » h̄gr̄k̄q̄pw̄^aūcn u| go dgpA ô j cpi | qw
c n̄f̄f̄²u0 C p{^au| ^ax̄ o c̄tucm u| »u| ḡtk̄pv gl v u³Āi 3/4
p{3/4 v̄g xkuu| c<

*š Hgn²i # J c c u|cn̄q̄pk̄k̄k̄ 2u f̄tk̄^ar̄qr̄k̄ dclv^at
ucko M̄q̄pūc̄p̄v̄k̄^ar̄qr̄f̄ gr̄gp o cu^aq|p̄cm cm̄qt̄ euc̄nku
j c|cl̄k̄^ai w̄m xg/ḡj gw̄k ngv0 i r̄rgp g/2tv c r̄qlcr̄k̄^au
n̄³gr̄g| dgppĀp̄ngv c̄t̄c. j q̄i { Hgn²i gf̄p̄gm lgr̄gp̄u³Ān̄k̄
gddgp c| gugvdgp c o k̄ h̄gi {xgt̄ḡk̄p̄m 2u ^ai {Āk̄p̄m c|
3/x²k̄m̄gn gi {gv²t²udgp. c [Āf̄k̄] gr̄gp k̄^ap{w̄pc̄n̄f̄*

G| xqrv J co k̄f x̄k̄ugm̄gf²u²p̄gm i qpf qucp v̄kn̄q̄rv
o ci {ct^a| cv̄c0 Eucm l»xcn n̄ŕu dd ngt̄Āngm̄ per̄l̄ŕp{tg
c u³Āi 3/4{x^an̄³uqm̄ co gn{ḡmp̄gm̄ j cv̄³uc c̄r̄w̄ K0 Cd/
f̄wn J co k̄f gn̄l^apv̄c o ci^av̄ c̄t̄c. j q̄i { n̄k̄f̄lc c| ^an̄
r̄co xg| gv̄²uv̄ c n̄gl²d n²u t^ad̄|| c c| qtu|^ai k̄^ap{^av̄/
u^avc r̄ct̄ro gp̄t̄g0

L̄p̄kwu 48/^ap »t̄k̄ uk go dgt̄v̄/0 gi i {Ānḡn̄l̄ km̄
M̄q̄pūc̄p̄v̄k̄^ar̄qr̄f̄ d̄cp. c [k̄f̄k̄ r̄ct̄m̄er̄w̄lc gn̄w0 Mg/
t̄gu| v̄p{gm̄ o q̄j co gf^ap̄qm̄ xgi {gugp0 X²i tg c u| wv̄³p

ku o gi o wcvnq| km c| gtn²n(gp0 C p²r 2 rlgpg| ô
šRcf kucj ko k² euqnduc#5 Uqn² 2 rlgp c u| wv²pk Fg/
t²m wtwpm c mcrk²0 Xku| ccfvc hckpcm u| cdefu²i²a²0
Cdf wn J co kf c u| 2 ngu. j quu| cp grp{²Â» gtn²n(gp
j cmi cdc. p²| kc v²/ô gi gv0

ô P gj lcr o crkA O kv vgi {gmA ô hqtf wn o quv
vcp²a eucrcpwn c o 3/4 3/4vg u t uqtqndcp² a m». ctep{/
twj² a u wf xctkgo dgtgnj gl 0

ô Mgi {gungf l²m vcr²p u| »pk c p²r j gl ô
x²a²rcu| qn²a n0

Dgu² 2 rpkA C xcti² a nj q|. c j cr² twuqnj q|. c u| qn/
i² a nj q|. c o cvt»| qnj q| A C u| wv²p eucm n²4 xgvrgp
n²4 p{ gl gv²xgn u| qnq w u| »v x²a²ncpk= c pci {wcmcn
cnkm o²i o kpf ki o²tj gvgvrgp o²n²u²i dgp xcp²cm
crvc. C p²r u²a²o²tc pgo gr²i pci { ngi {gu²i. j c
p²j c n²v j cdc w²a²vAJ cncpkku cnetlcA

Cdf wn J co kf pgo ku c u| » go dgtg0 O kv o qpf/
lqp gl gmpgmA f o. j c kw o 3/4 3/4vg c| v² a mcv²a m j qi {
u| »pk ngm ngi {gp0 O kpf gpv c j c|²tv² u c j cvcrqo/
2 tv. co gn{pgm xgu| gpf u²i g u²3/4² v² a tp{²m² o »fl²tc ²Ân
c l²p{ dgp ²Âu| » r crqvc h²4²40

Hergo grk hgj² tng| v{ u. j j² u nleukp{ ng|²v. c v²/
o gi gp²o w0C rcf kucj u| »n<

ô Vt»ptcr²r²ugo »vc p²r go dqrf qi u²i²a²pcm² u
Âf x²pgm u| gpvrgo o kpf gp gt o gv0 I {gto gngko pgm
vgnkpvrgmdgppgvngv0Kvrgp gttg c vcp²Âo 0

G| c| gi² u| dgu² 2 f0 Gi gvxt 2 rlgp|² u v²4v n0 C
u| wv²p gn u| 3/4 dgu² 2 nv p²r² j gl 0 O quv j² a² n² ucp d»nkv.
o ci c ku o gi xcp j cvc c ucl²v ukng²v r0 M²4p{ gu
u| go o gn hqtf wn c o 3/4 3/4vg² a m» gi {km o kpk| vgtj gl 0
J cpi qucp. j qi { c n²4 ²Ân² m² mku j cni² a m o qpf lc<

ô Crcj d²Âpvguug o gi c| qnev. cnkm 3/p|² tf g/
ngknd n n²4² o² u p²r go n²4² a mcm² u v rgo crw/
xcn²ko cvgrk² gi gp²4gv² n0

C p²r gv o quv o² t pgo ngj gv hgnct»| vcpk0 f v
v²4k c r crqvc gn vk |² a t»n² peqnev0 .. |² 3/p²km c| gtn²n
cn²0 C dgl² tcv² a n c i² a tf kv² m ô xcrc o k r ctcpeuv
h² r t g² twxg ô dggpi gf kmc v²/ô gi gvc| gn euctpndc0

C n²pvcpv² p² r qn{ k p²r. co gn{ c| gn dd o² i c|
Âf 3/4 3/4v 3/4 o² p{ gm r² a² tk² tn² lc gn w tgpf gl gw tq/

nqpu gpxvãpvgv²uv. o quv o ci^ap nñkÃn xcp rmgug/
f²u²dgp0 U|wv^apl^av cnetlc r^avpl0 Cdfwn J co kf. o c/
i^apcm ku kf gi gpÃn hgrf ãncp. o gi jcvqwp. 3/4pn^apv gp/
i gf c p²r nñk^apu^ai^apcn0 Wf xctqpeck²u ul^atp{ugi²/
fgk p²i {u| 3/4²dgp o gilrgpkm c rcrqvc dngugl²dg
p{ñp» »tk^aukhgj²t clw^adcp0

ô Okvcnetvqm j ñxglo Aô n^atfk0

ô Mñu| 3/4vpgk V²i gf# L»u^ai qf cv# O gi o qpf cpk
j qi { u|gtgvãpn# ô J cpi|cpcm ul^a|k^argn^arr c mÃ
ñpd^{3/4} o^ao qtqu vtnqnd»nc 3/4^{3/4}mu| »ro qn0

C ulwv^ap rucup. p{wi qf vcp grf lÃm o gi {0 R^at
r^ar²up{kg c v^{3/4}o gi xgl gv kv n o gi^an0 C dgvqrnu
fqwcm ku o gi^anpcn0 C| vtcmaf» o quv jcmep o gi/
u|»rñ0C dg^anqweugpf dgp o kpf gpnkj cnlc c ul cx^aw

ô Vgux²tglo ô o^at n^au xcp0 O gplvgm o quv
j c| c²u cnw lcqm ul²r gp nko ci cvqncv00

Mgl²xgnd Æuãv²u^arf^auvkp0

C v^{3/4}o gi p²o^ap. eugpf dgp. tgpf dgp j c| c/
vnetqf kn0

! u o quv x²i tg o gi ng| f fj gkm c| gi²u| hqtte/
fcmqo²tvrg g²u e²rlc< c| cdfwaj co kf k tgpful gt hgr/
ul^ao qñ uc0 Owul vhc Mgo^an cn tpci { U|cmkpkdgp.
ul kpg^am qfxc r^avlc rgi pci {qdd gmgu²i²pgm grv /
p²u²v0 K o ckn rcuc. gi {nqt k grhqi cv»lc ku grv pkm c
uãn{gul v dgp0 O kpf gp gmñkxgvng| pcr Æ o gr rgr g/
v²uv j q| c hgruki^a|qw nñ⁴x²rgo²p{ ul^ao^atc0 C hqt/
tcfcmqo gi {tg o gi rgr dd ul²rgu²i ltqpvqp ng|fk
²tg|vgyk j cv³u^av0 C| gzrqp^arv j co kf k²pwuqm o gpg/
mãp gmñ Hgj ko rcu^av. U|vco dwn tgpf tj »j²t^av
o gpgmã^aug nñ⁴dgp²tk w»n c v^{3/4}o gi i { rñ⁴rgv0 G|v
c| go dgtv cnkpgm o nñ⁴u²j gl ul^ao vrcp nkx²i|²u.
dgd^{3/4}v^{3/4}p²u vrcfv c v^{3/4}o gi p{kw we^ap o gi rkpugrk
p²o gn km d^avcdd j co kf k h j kxcvcpqm gi {u|gt gp
pgo cnetlc wfqo^auwn xgppk c| gugo²p{mgv< Vcej/
ul ko rcucuc eu^aul^atk h vkn^at r²rf^avn pgo cnetv gr/
v³xq|pk ñp»cu|vrc o gm n0 Co knqt c| gi {km det^avk
pci {j cvcmqo f tci go^aplc grtqj cp j q| |^a 2u nñ⁴p{^{3/4}
t^{3/4} pgnk o gpgmã^{3/4}p. Vcej ul ko o gi nñ⁴u| 3/4pk c hgr/
cl^apnqwugi ñu²i gv. fg x^amcvxqpxc ñ { hrgnk

ô KK p{ c rcu fđ tcf g0 P kpeu t^a eu^a ul^a tk tgp/ fgrv0

! u pgo o gi { c ftci qo^a ppcn c n³/xgv² itg. O^a upcr j clpcndcp eugpf tl^a t t l³/p² tv0 C| Āl nqt/ o^a p{ pgx² dgp grhqi l^a n0 UĀn{ qu d^a pcr0 cl^a uqm w^a p. ² n j cmwn² pvngt Ānd³/v³ pdg0

G| crw U cmprkndgp c| klĀ³/4³/m³r^a tv r gto c/ ppgugp Ār² ug| km c| ³/u| gj ³/xqw rctrc0 gpv gn n² ul³ ² ug² u c n³/t³ cpf» x^a ru| v³ uqm Āi {² dgp0 O wul vhc Mgo^a n o kpf gp per qw xcp c Qn{ or qu| J qvndgp² u c M³ ku³ n³ r cmv³ dcp. c hqttef cm0 n² v ul² n³ |^a dcp0 C r qrknc gi { o^a ukm Āl euknc. c ul^a o | gv² ud n c hgmgr² u j ³/t² tg j c| cv² tv Cj o gf Tk² c dgl. gl c uko c. ngungp{cteĀ ul j cr³ p² mĀ x^a ru| qw htk wt^a u. kp/ n² dd d² ngdgrk r^a tk uk i excn² tpcm o kpv v³/4³/m r qrk/ mwupcm n² ul » n² r xkugn j^a | k gr³/4³/m gr³/4³/m. uqtte j k xelc j c| c Gpxgtgn² u v³ tuckxn c o² i go ki t^a ek/ dcp² n klĀ³/4³/m dct^a vck0 J c| cv² tj gv U gdcj g f k p. c| go ki t^a ek dcp grj crv n² | cf » ul wn³ pk u » i qt < Fc / > o cf O c j o wf n² | cf » hc ku0 ~ tk^a uk qx^a ek hqi cf lc c r^a n² cwf xctqp0 R^a tk u. Dgrkp qpv c c o gpgm Āngngv0 O wul vhc Mgo^a r pcr < gi { gvrgp i qpf lc xcp o quv o^a t < j qnxcp c| j gn² g c hqttef cm kper crwA

Gpxgt dgl i qpf qunqf km t » r. j qi { ugj qr0 P go ul ³/xgrk gl v c p { gtudgul² f . n² r | gn f xgl² t nctk dcl/ v³ tu^a v0

F gego dgt 39²/p o gi p { kl^a m c v³/4³/m rctrc0 gp/ v0 Gi { go dgt³/4³/p { k ul Āpgvr² u w^a p0 O kpf gpnk c ul wn³ p r^a hqt f w^a u^a v Āppgr rk < o ci c o quv j kvrgp c| klĀ³/4³/m r^a j qn^a pcm pci { o guvt² p gm p { kx^a / p³ lc o ci^a v² u o ci^a pr² p | v^a t^a d » n 37 o knk v cf qo^a / p { q | e² r lctc0

Mqpuwv³ p^a r qn{ j cvcr0 eu h vgtg. c| Clc U » hc gn w ulf m » v ul ³/p j gn { g c v³/4³/m v³/4³ pgrgo pci { » t^a kpcn0 Euwrc o Āv² u pci { u^a i gl c j gn { 0 K g p { Ā r km dg c| uk J { r r qftqo / v² t ku. cj qn c t² i l gm c n / xgtugp { gngv vctqw^a n0 K v^a m c j ³/t³ gu Eucxctvul nqr. co gn { gv c i³/4³/4³/m c f gnj k Crqm » pcm cl^a prqwem hgn c r r v c gck x² tgu eucv gn v0 ! u kw^a m c n gi Āl cdd nqt

cl^a pf² ne ku< KKO Xkro qu p² o gv eu^a ul^a t cf qo^a p{c
U wo dwnx^a tqur^a pcm gi { »tk^a uk n³/4 crm^a n³/4 m^a0

Kv i { Ångngl gw o quv c v³/o gi 0 Go dgt/go dgt j^a /
v³ p0 U^a | gl gtp{k x³/4³/4i hgl 0 F go qntcvmwv kv² | o² p{
c hgl = hgn² i g ku² rr qn{cpv j qtf. o kv c | wqnu>
wecugrt 0 P² j^a p{ hgl² t wtd^a p vtn^a Mc c hgl t gpi g/
vgi gv< gl gngv c rcrqm xkugkn0 C rctm o gpv gn w.
dctc. c | cnd^a p i^a tfc hgl² tgi { gptwj^a u crmwrck
lqddtc c ul^a kck | w^a xqm^a npc m |³/f wtd^a plckmen
n³/4 v^a m gnu> txc o kv gp hqvqucdd jgn{gp c | kl^a Å/
v³/4³/4n³/4m o cegf> plck eucr cv. o qf gtp. f^a | ul vgrp.
rtcmkvw ngnk/gi { gptwj^a xcr0 C | Clc U> hc o kv gp
nk^a t> l^a p. gtn^a n² p. eu^a n³ p. j cvro cu mwr qn^a lc
n³/4 Ån rtqvnek> u n³/4^a peukm ul^a | ck vqmp i cpcn0
Euqf c j qi { pgo p{ qo l^a mgi { o^a uvc { qp0

X² i tg o gi² tngl pgm c n³ r xkugn n0 Hngv² p. Åp/
pgr n dgp0 X² i gn^a v cvcrp uqtdcp l³/ppgm w^a pwm c
rqrkknck² rgv nk^a n^a u^a i ck fkr mo cv^a m pci { n³/4 xgvn0
C vtd^a Åp³/4n³/4p. t gpi gvi m^a n³/4³/4f k p2 | . j³/4i { gm² u
wtcn0

O quv m^a v lgn j ctucp hgr0 | rlgp² u o qtclrk m x² /
i ki c v³/o gi gp< l³/p c ul w^a p0 J cv j> hgl² t n> xqplc.
ctep{qu j kvcl^a 0 G | gtgi {² lu| cnck n³ r 0 C | Åppgr n³ u
j cpi wcv^a v c | qpdep gddgp c rgtedgp x^a tcvcrp kvk/
fgpu ul cnd^a Mc l² rldg0 Gi { gi { ul gt cu| qp{ vqrncqf km
c | gnu uqtqndc² u vqtneu| cnef v^a d> n^a Åx³/4³/4 kn<

ô Relf kuj # Cff xku| c c n³ v hko cv# I { kmqu#

Ugnk ugo j cni cv t^a 0 C v^a xqrdd^a m> m² ul tg ugo
xgw² m c | kvkfgpuv< c | cu| qp{v l² n r gte crw grxg/
| gvm C ul w^a p ctec o gi ugo tg| f År0 Wi { vgw.
o kvj c² ul tg ugo xgwg xqpc c | gi² ul gv0 C nqyuk
vx^a ddtqdi < c |² rlgp² u. Åxtkcn^a u o quv xcn> dcp
gp{ qo o kv gp o^a u j cpi qv0

Cflwm^a vc ul >> vc ul go vcp Åncn0

ô C n³ r xkugn m l² n³/4 dgp hqi ncnm j gn{ gv0 Mq/
o qn{cp. o² n> u^a i vgrlgugp² u lgrgpv u² i vgrlgugp Åpgm
netquu² ngnkndgp0 C vtd^a Åp dcrnf cn^a p ctepp{cn tqv/
nef^a uki hgrf^a | ul^a | xg. j gn{gl nrf pgm gn c ul gp^a vqtqn0 C
uglm³/4n³/4k n^a o hgl² t ugn{go twj^a dcp. |³/4f wtd^a p dcp
xcp = c | w^a o^a m uo ctc i f ul^a | p twj^a nev xkugrpgm = r ktqu

hg| Ānīp nīpp{ lī v{qn ngpi 0 C ul wñp hrgw rīx
 r^aj qn{ vrg xcp o ci cutepi Ā nevqpcvū| vgmgn c fkr/
 mo cvr^aj qn{qm gl gtu| p v | dgp ²i pgn0 Rgt| uk
 pci {nīxgv. Ok|c Tk c nī^ap. c jgtegi k xgtu|»
 v pkm hgn ngi kpnīdd ^amco k Āppgr n twj^al^apcm i {2/
 o^apvckxcn= xqp Dkdgtvūkp d^at». c p²o gv pci {nīx
 xgv. o kpf| v c uqm tgpflgngv xkugrk co kv eucm P²o gv
 qtu^ai ²u V³/₄³nqtu^ai gi {Āwgugp cl^apf²nū| jcvqw
 pgn0 U| go dgp c ngtgu| v²p{ r^avtk^atnc r^aj qn{c< v|
 nqo qn{. vgnp²n{gu. ul ki qtĀ cteĀ ul cñīncu l²thk Ān
 dgppg=hgnv p vū| vrgv xgu| knī³/₄Ān ngv0

Rqpvqucp gi { »tc v| gp³/₄ r gtenqt dgr²r pgm c
 jgtegi gn0 C tqmnpqm c ul wñp hck ²u c v³/₄ddk Q|/
 o^ap. xgi {gugp0 U| grko. Cdf vn Mcf k. Cdf vn J crko.
 Kgf fkp. Cdf vn O gf| ukf. Cejo gf ²u c v³/₄ddk jgtegi 0
 Xcmo gpp{ lgp gi {gptw^adcp. o²i c hcvrddcm k=
 c hgp w jgtegi gmp nīxĀn wi {cplu gi {/nīv gi²ul gp
 hcvn ngi²p{ng lu dgxqpw0 G| gm mī³/₄p³/₄gp ²nxg| knō c
 tgrtg| gp²nīu0 K pnīpv c nīp{³/_mĀmgn nī³/₄n³/₄km
 gi {o^auv. uwwqi pcm pngxv²ipgm ²u nīx^apeuk rĀcp/
 v²u»nev xgvpmc| go dgtgmhgr0

! u o qu(0) jktvrgp pci { eugpf (0) Kv xcp .
 c ul wñp0

G| c nī²tvgv. gl ngppg c| wcmqf »A Euq| qi xc.
 i³/₄d²p. jco wū| Āng cteecn rīr dg ²u o kv gi { pci {/
 dvgi xqpu| qlc o ci c w^ap c nī dck0 X³/₄³/₄d²rīu
 ul Āng nevqpcnd^alc vĀnī i qucp d 0 Pgo p²| c
 i {Āng| gvtg. eucm o gi^am t^av²o cu| nūf km c metf/
 l^atc0 K nī³/₄p²pv o quv c ul cñīm^av t^api cvc0 ! dg/
 pg| pgm hgrlg ô pgo x^ancu| qn< j wp{ qti cv» ul go gk c
 rpxgi dg v²xgp gn0 C| go dgt xcrcj qi { pgo wū ul c/
 dcf wpk c jcuqprw»r0 Gi { wj w co gn{gv l²p{ gu
 perrcn gn t^api cvpcm tglvgnīd r0 Xci { gi / d p³/₄.
 cnkc dī»^ai pī²rv^atlc(0)

C| gn cf »k go gr²p{gp o quv o gi ul »rcn Crik
 F| ugxcf dgl. c ul wñp Āl gnu vknītc. C eu^aul^at
 v»pdgu²f²v qrkcuuc hppj cpi qp0 C| ki c| jīx m wtc
 o ci c pgo dgu²r0 C ul wñp nīlgrgpvk j qi { c| cmq|
 o^ap{v ucl^av l»ul^ap^ad»n^a nīqwc xku| c. pqj c šgi {gu
 tqu| cnetcvĀcp^aeucf »kō gtt nrg cnet²mdgu²ipk0

O¶ F|ugxcf dgu²n J co kf wpcvq| xc^a m gi { km n¹ /
d^at>n c o^aukntc. o kpf n¹v ngl²v jcvcm cu i^{3/4}dg
netf l^ap p { wi vxc0 O quv c| qtt^aj q| cnetlc go gpk
| ugdngpf l²v0 C | ugdngpf ngukn0 C| Äppgr u²i tg
hi { gn. k i cvqw u^atp { ugi²f gm pgo xgu| km²u| tg c
dcrgugv0 C u| wv^ap x^at gi { o^auqf r gteki. ngw ki.
o clf pgo l²r r gteki 0 Ugnpk ugo o q| fwn o²i o kpf ki 0
Gttg c rcf n>j q| Äk c netf l^av²u jctci qu r kncp^auv
r^{3/4}xgn c| qf cnv^am nco ct^auqm hgr²0 O quv xgu| km eucm
²u| tg o k v^{3/4}v²p0 O kpy c r wun^ad>n n w²m xqpc nk
ngv. tqj c p p m hgr k g p p k²u^a p { Äwpc k hgn²i² p gm
eu^au^atkngul ngp l²v0

F|ugxcf n^{1/4}dgp tgpf Ärgvrgp Än qrxcu vx^add0 X²i /
tg. x²i tg dgx²i | k c| cmew^ap { vku| vrgw n u| cdcf u^ai /
u| gtgvw n v^ar tcf » vt>pdgu²f gv0 O quv c| gi { km pc/
i { qp^{3/4}gi w²o c ngl f u²vgt lgu| vgw ngl gmn gn ko^af /
nq| pl0 J cpi qucp o qpf lc c| ko^av0 C u| wv^ap²u xerc /
o gpp { k lgrgr²x u²w²tlc c netl^av²u ko^av o qto qr0
Kvrgp^a r^au^av n²tkmc j c|^atc. Äl o wv n¹u^ai wntc0

C tgpf g|²udg o quv nku j kdc euÄu| km dg0 -i { n¹v
u| km c u| wv^ap o²i u| go²n { gugp ku cnetv p²j^ap {
n^{1/4}xgvrgp u| »v u| »p l0 M¹x Än c| Clc U| »hc gn vk v²/
tgp. wi { cpqw. cj qn j^atqo go dgt^{3/4}v xgn g| gn w Cd /
fwn J co kf pci { erlc c j Äu| gl gt hgn¹| cf v lcpk u^atv
ngi { km qncw c ô c p²r²u ncvpcu^ai tkxci^auc vgv /
hq n¹v²tl0 J cpi qu²rlgp|²u. euq n lcu^a|^au u| t f km
dg c vgtgo dg< c n²r xkugn m gum^av²vrg n^{1/4}xgvrg| p²n0
C| qdcp qf cnkpv o^at c|^ai { Än gn ¶^auqu Äf x^{3/4}r² /
ul²k ku o gi u| »rcpcn0 C|^ancr¹pqu | t| cxctdcp c
rctico gpk u| qn¹uqndcp o²i ngx²u² l^atcvqu. Äqp /
pcp x^arcu| vqw xk²nk n²r xkugn ngv grci cf lc c rgn /
ngugf²u²u pgo xgu| km²u| tg c| wcmqf » vqtqmn^{1/4}u|^{3/4}
tÄr²u²v0 VÄnqt^ap pci { tqdcllc n^ancm hgn c| gumÄ /
v²vrgj g| ô c u| wv^ap o gi ngr gv²u²v rgnÄ f xg. gi { nku
neto q| f wewen eugpf gv cnet kpygp k fg g| v o kpf gpk
l²rtg²tk²u c uqm|^a go dgt²rlgpg| pk ngl f 0 K0 Cd /
fwn J co kf hgn²i g r g f ki gi { l²tcf v o q| f wcvq v
vgu|. o gi t^apf ¶^alc x^an¹v²u pgj²| ngu. euqu| qi » r²r /
vrgmgnko gi { 0

XKKOGmgplttcf crqo 0

Crki v²tv perktgpf^tg V^{3/4}3/4³mtu^ai c jktvngp
x^anq|^au h^{3/4}4w ô o kpf gp rqrk³nek x^anq|^au ruucp
2tkm c| v³p o^at»nj qpcrtc dgn^{3/4}xgng| km ô o^atku
o gi kpf wn c vknqu gmgphq|^(co cv0) O²tv tglvgw^g o c/
i^adcp c rgi pci {qdd ukngt ô c dwn³u o ci x^avkuA

V^{3/4}3/4³mtu^ai dcp c| kl^{3/4}3/4³m i { |grgo o gn gi {/
kf dgp j^atqo k^ap{d»n ku ng|f fkm c tgcnek0 Gn /
u|^{3/4} p²o^ap. c h^{3/4}f crw. o clf o kpf d^avtcdcp ng|
u| gtxg| ngf p0

V³dd r^atj w| co qu rqpvt»n kpf wn nk gl c o q| i c/
mqo 0 C| gru nkpf w³uk rqpvc o ci c K0 Cdf wn J c/
o kf 0 C j cvcrqo j q| u| qnqw rqrk³mw/eu^au^at gi { rgt/
eki ugo p{wi u| km dgrg u| kp²p. j qi { gl gpvAn c|^an
ro r kco kupcm eucm gi {u| gt . tgrtg| gp³n» eu³uc
rgi {gp0 C u| w³p j cvxcpj cv²xgu. gtglg c| qpdcp
o kpf gp n³w| »rci qu nw³u^ai c gmgp²tg o c ku tgpfk/
j gvgwgp0 Vgrlgu vkqndcp. fg cpp^an pci {qdd pgnk/
u^ap^auucn i { lk c| gt v c x^atcwcp r^atfwewi^auj q| 0
Eucm nk^atpk²u gt u^{3/4}pk< c hqttefcw^atqm o clf
3/4u| gxgu| pgmc napeqp0

C n³w| cv pgnk cf ki c| cv0 K³v²tng| Åpm gn c| gn/
ngphq|^{(co cv o^auqf km²u jcto cf km wqn» nkpf w³uk}
rqp^aj q| 0 O³ Cdf wn J co kf c [kfk| dgp dcpngwgp
n³vc xgpf²i Ån c n³r xkugn ngv²u uqnu| qt c jgtegi g/
ngv ku. cu| vcrj q| n³tk kn| gpnqt u| »pqnqn pgnkm ô
o gi l^{3/4}w c jcpilc. ô c| cmqvo^ap{qu^ai t»n cffki
c rqrk³mwqm o ci^apqu 3/4u| gl^{3/4}xgvgngp. vknqu r^atv
^au mw³xceut^anqp. o^atku ng| fkm mkm³lgkngv o gi /
crn³cp0 C Dgtrkpd n Mck»d»n Nqpf qpd»n R^at³ku /
d»n T»o^ad»n j c| c^{3/4}3/4³pr^{3/4}w go ki t^apu o kpf o^au go /
dgt. o^aun³r n³r| gng gn u| go²n{k²u v³ti {k u| go /
rqpvd»n ci { | gr³gu hqttefcw³o gtgf o²p{gk0

M³v gmgpu²i gu v³dqt ng| f ruucp nkrcmw³p0
C o cegf »pkck n³4 rqpvd»n nkrcmw³ kl^{3/4}3/4³m r^at³vk
x²i tgi clw³dk| qu^ai ô o gn{ c ..J crcf^au²u Gi {u²i
Mqo k²lcō pngxv xgwg hgn v³Ap{qo »t²u| v n³vq^am³
d»n^am0 Gpxgt. c nku. x²nqp{. n³p{qucte³ xgl²tnetk
vku| v gr³gi { Dgtrkpdg n³vq^apk cv³u²pcm fg o ctf

o²i gr²i jcvcrqo h²iv . o ci^av xgu²n{gugp gzarqp^aiv
 vku|v.cnk pgo p²|k l»u|go o gn jqi { c rgeugp{²v o clf
 c p{wi cvt»n jcl cv²tv ekxkn ul cmpr/rqrkknwuqm²u
 ul^ao |gv²ud n xku|cv²tv n²4 ki c|icv³uk vqqtgvknwuqm
 hqi {cuul^am gr0 G|gm n²4 v xcp O wu|vchc Mgo^an ku.
 cnk U cmprknkdgp eucn>fqcwcp x^atlc. jqi { c ulgtgp/
 eug t^ao quqn{qi lqp0 C nqo k²dcp^ancn²dcp c rqi^atk
 grgo gm xgw²m^av o quv c v²u²u²0 G| qfexgl gvgw.
 jqi { c hcvcn vku|vgm kpn²dd ngo qpfvcm xqpc o²i
 c Mqo k²pcm gppgm c ncuucp nlcrcnw» o gr²mq²t/
 o^ap{pcm xgl gv ulgtgr²t n ku. eucm c ekxkn rqrkknwuqm
 v²ngpi dghqn{^auc ul pl³p o gi0 O^at grj cpi|qw kv
 qw gi {/gi { vknqu nqo k²/A²ugp. gi {/gi { vgo rgtc/
 o gpwo qu vku|vk hgnl»ncn²u. o kpf ki dk qp{qu ul go²/
 n{gm grgp nk²ng|gwgp0 C|²r²p l^atv gddgp O wu|vchc
 Mgo^an ku. cnk c hqttefcro^at vku|vgm n²4 An vcn²p eucm
 F|ugo^an dgl tpci i {cn c n²u ddk o kplu|vgtgn tq/
 nupul gpxgl gw0 Gpxgtgn ô co² c nkuvgto gv t/
 pci { U cmprknkdgp^anqo^auq|qw. ô c|wqn» kf dgp
 ngj gv ngi nk²tvgm gi {o^aupcn#0 L»n o gi n²w²m gi {o^a/
 uq²p ô jku| h²tk c| kn{gv o kpf ki o gi²t|k ô jqi {
 xgv²n{v²tucm²u jqi { l»v pgo x^atj cvpcm gi {o^au»r0
 P {knep xku^an{nufpk c|qpdc o²i ugo cnetvcn0 Mg/
 o^ancm U cmprknkdgp o quv o^at jkcvcrv dqu|v²uc
 xqn» o²i gn|ngi grkp²|vg. jqi { c jcf A²i {o kplu|
 v²tkwo jkcvcrucp ku^avj gn{g|vg c ulcno knk jcf/
 vguj gl0 Mgo^an vgi^av kw o ctefj cvqw c hqttefcro
 ul²pj gn²p0

C nup|gtxcv²xqncm c| kl²A²4³m r^atv vknqu gr
 nqu²i gkpgm o cm^atc jclvqc o quv c xk{gv gi { x^a/
 icvcp n²Ar qrkknck gugo²p{ ku< c o qpctej k d²euk
 rqrkknck xgl gv u²i g c dgrkpk nupi tgu|wu f³o v²ug
 crlr^ap. 3: 9:/dcp o gi ul^amc c f²rk jcv²telxkn ul qo /
 ul²fqu Dqu|pk/J gtegi qxlp^av0 O quv r gfk i 3; 2:/dcp
 šfg lwtgō ku dngdngl vg0 G| gi {²dn²pv c pci {jcvn/
 o cm tgcrck eugpf gu o gi gi {gl²u²kpgm gi {km n²4gv
 ng| o²p{g xqn0

V³4³nqu^ai dcp qu|v^angngpgu nkngpi²ugntg ng/
 t²Av c uqt0 Uqn²ki vctvw gl c|^ancr qv0 C| qu|v^am²u
 c o ci {ct^atwnev dqlnq^an^am c| we^ap r gfk i v²Ap/

vg²ugm | clnqwm ng c uqm eucr^auvⁿ gmgu²gf gw r/
 nqu^ai n³4²dgp0 C| cppcrgugm hgrgi {gl v²m jqi {
 gi { hxcvn o ci {ct v²pi gt²u| vku| v. ô cnk jcfkj cl>|^a/
 xcn ²r^rgp Mqpu^vkp^arqn{dcp ^anqo ^auq| qw gi {
 kn{gp v²pv²u cmem^axcn ô o leuqfc u| go ²n{gu d^a/
 vtu^ai i cn x^aiv^c ^av o ci^av ²u c x²f gm²tg d²qwcnev
 c nk³4 k v³o gi gp0 G| c| grk>f cmqt dgl^atwc c
 xk^ai ucl>v ku0 C hxcvn o ci {ct v²pi gt²u| vku| v< pci {/
 d^ap{ck J qtyj { O km>u xqm. O ci {ctqtu^ai n³u ddk
 nqto ^ap{| >lc0

00 C v³4³m p²r ng| fvg ²u| t²gxgppk jqi { c| À
 nqto ^ap{| cv ugo qn{cp vgwgt u. o kp^v j²g²ul vng o c/
 i^at>f0 C| kl³4³m c| | cn kpf wncm jqi { c dktq/
 fcqo vx^addk o gi euqpn²u^av ngm c j c| chknpcm
 o gi cmf^an{q| plqm ô ²u o g. ciki xcppcm jcvcm qp.
 o^atku Àcdd eucr^au ²tk c| q| o^ap dktqfcm cv0 C nqt/
 o^ap{| cv rgtu| g o kpf gp v ng vgrj gv v o gi r>d^an<
 gtgf o²p{vgrp²0 C d²euk^atwm dqlnq²wlc pgo ²t ugo /
 o k0 C m²nrqik²nc u| kp²p pgo o wcv hgn ukngt0 C|
 gi {gnp vgp gt xku| qp{qm n³4³gvng| v²dgp V³4³nqt/
 u^ai n³p{vgrp dgrp{w| qf pk c| gugo ²p{gnlg0 O gi /
 kpf wn c r²xkpc= c v³4³ddk gugf²ngu dcm²pk x^anq|^au ku
 dg^am0 Hgtf kp^apf dq^at e^at. c v³4³nv n h²i i gvppgm
 p{kn^ap²lc o ci^av ²u o gi vci fcl c| cf>hk²gv²u0 C
 i³4³ c uqnev xkcvqw M²v²v hqi rclc gn x²i²tx²/
 p{gugp0 Qtqu| qtul^ai ²u Cpi rlc ^an³uhqi r²n³uc w³p
 c| gwt>rck n³4 p{w| cm k ^ancr qv l> kf tg o gi kpqi 0
 Hgtgpe Hgtf kp^apf. J ³4| gpf qthk Mqpt^affcn u| ³4³gvng/
 | km c Dgrxgf gtgdgp. c j>hdwtik š³4 gi ctenō m²km²lg
 gmgp. V³4³nqtul^ai r g f ki o clf pgo nktqddcp>lc ngw
 gi { Àcdd xk^ai i nqphrci t^aek>pcn0

K{gp n³4²0²p{gm n³4 v c v³4³m nqto ^ap{| cv n³v
 pci { r^atlc o²i lqddcp u| go dngt²0² gi {o^auuc0
 C| Ài {pgxgl gw šdgrkō. rkdgt^arukdd. rqi^atk u^atp{
 hlg c i>n{cp{cm² x²| pc U| cdgj gffkp0 P²j ck Fc/
 o cf Ocj o wf m²nr³4³p hgrp w hc. Lxuu| vh Kgf fkp
 eu^au^atk jgtegi. o^auqf/v>p³4³n³4 v²guk/r²gm²k l>dc/
 t^avlc0 Dk²cm cu guk ³4u| gl³4³gvgrngp Kgf fkp r²cnq³/
 l^adcp. c \ kpf| uk²rk M²w/dcp. c šⁿpequ Rcnq³dcpō
 c n³v v³xq²rk tqnq²u kp²ko dct^av vknqu nqpur k^aek>v

u| 0 P go n̄xgugddt n xqnv u| ». o l̄pv ctt>n j qi { U c/
 dcj gfflp c pci {xgl²tk^an̄^autc r^an̄^akn̄ K gfflpv rg/
 fki ô n̄kpgm o quwcp^adcp ki gp o gi p w c u| c txc. ô
 eu^au|^att^a n̄k^anq^wm xqipc n̄k C l³k^gpf dgrk n̄r̄k̄c
 2 u c u| c p f t c |^a o l c r q o r^a u c p o gi 2 t v g w² m gi { o^a u 0
 H n̄r r r g p r g f k i c d d e p gi { g | v g m o gi . j qi { d g r̄ v
 v̄ n̄ C d f w n J c o k f 2 r r Āi { Ā l w n d e p x c p . o l̄pv c | k h
 l Ā v 3 4 3 4 m d g n u g m p h t c n e k l c . c | Āi { p g x g | g w š w p k /
 p k u v n̄ < c š Q q o k 2 r q w t n̄ w p k q p g v R t q i t 2 u ō ô c |
 š G i { u 2 i 2 u J c r f a u d k̄ q w a i a p c m j k̄ x g 0

C | g m u t k v 3 4 3 4 m d g r q r k n̄ i t c gi { 2 d n̄ p v ki gp
 l > n t a k r g w c | c o q p f a u . c o g m { g n c . f k r n̄ q o c x u | a l
 l g m g o g | g k 2 c | k h l Ā v 3 4 3 4 m n̄ q t o a p { | c v g n u u | g t g r f̄ u 2 <
 š O gi v g w² m c o a u q f k m f r 2 u v . c p 2 m Ā n j qi { c | g n u v
 o gi v g w² m x q i p c ō 0

C | c x t q m n̄ k r c w c p a u a p c m g n u l g r g . j qi { U c k f
 r e u c . c | Ā l p c i { x g l 2 t . c | k h l Ā v 3 4 3 4 m n̄ q o k 2 p { q o a /
 u a t c n̄ g n̄ 3 4 | 3 4 p v 2 u x k u | c i f r g w c n̄ q t o a p { 2 i f t n 0
 U c k f ô C d f w n J c o k f t 2 i k d k̄ c m c u g o d g t g ô p g o
 x q n v c | k h l Ā v 3 4 3 4 m p g m g r̄ i i 2 t c f k n̄ i k u 0 C n̄ 3 4 d g p
 n̄ k r c m w v d g n u g m p | 2 m c | q p d e p v Ā n̄ i q u e p o q f g t p .
 g z r q p a n v h k v c n j c t e q u v u g o g p i g f c e u Ā e u t c < c | Ā l
 p c i { x g l 2 t p { q r e x e p 2 x g u x q n v c d f w j c o k f k j k x c e r p q m
 r g w < M l c o k n r e u c u | c p f t c | a . c n k c t 2 i k 2 t e c r w
 k u o k p f k i k i c | u i q u 2 u o 2 t v 2 n e f » d c t a v l c x q n v c |
 k h l Ā v 3 4 3 4 m r t » d a m q | a u q n p c m ô o a t c o g p p { k t g v /
 j g w g 0 G o k e w p 2 r u | g t k u x q n 0 P c i { c p i q r d c t a < c
 d t k v q t k e p v e k n̄ g m g u j k̄ x g 0 C p i r k c p c i { n̄ 3 4 g v 2 v U k
 I g t c t f N q y v j g t v q n { c p 3 4 3 4 w l q p i a u e n h q i c f w c |
 n̄ q t o a p { | c v c c r w c v 3 4 3 4 m h x a t q u . j qi { o 2 i c
 n̄ x c k v k u n̄ k h j v̄ m c n̄ q e u k a d » n 0 C n̄ q e u k v r g f k i c n̄ g r /
 n̄ g u gi { g v o k j c m i c w m o c i w m x q p w v m x 2 i k i c l 2 n
 x a t q u p 0 C | 3 4 gi c p i q n f k r n̄ q o c v | c x t q f q w r k t w »
 c t e e c n Ā n v c n̄ q e u k d c p = k n { g p o 2 i p g o v 3 4 v 2 p v o gi
 x g r g #

C v 3 4 3 4 m 2 i o q u v o gi l̄pv C p i r k d c p f̄ v l c c | v c |
 k i c | u i q u v̄ p { g | v c o g n { t g o k p f g p u | q t q p i c v q w
 j g n { | g v d g p u | a o k̄ j c v 0 0 N q p f q p d e p l g n p p p g m o gi

o^at²xgm »w c n̄i r̄dgt^a r̄kucdd n̄p{xgm go r̄n̄t cvqm
c o qf gtp^ān̄i qpf qm̄qf » v̄^{3/4}n̄l² th̄cm̄qm̄ d»r̄o

Fg c v̄^{3/4}m r̄q̄r̄k̄m̄w̄qm̄ gi {o^a u n̄^{3/4}v o kpf lqd/
dcp xgul ḡn̄gf p̄gm² u xgtugpi ḡp̄gn̄0 Ngi Ācddcp c|²tv
x^a r̄pcm nk c Mqo k² n̄gtgul v̄p{ gr̄go gk o gtv c v̄^{3/4}
n̄^{3/4}# k̄p̄t̄cp| ki gpu o »f qp v̄^{3/4}n̄^{3/4} r̄p̄p̄gn̄0 | r̄r̄gp o quv
l̄xcuq̄n̄^a m jqi { c. n̄gtgul v̄p{ r̄cm̄c x̄k² n̄gm̄ k̄m̄q̄n̄^a k̄
dcp ku n̄^{3/4}gr̄g| n̄gi {gp c v̄^{3/4}m p{gr̄k̄gp x̄c» w̄p^āu=
c n̄gtgul v̄p{gm x²i Ān̄ ku n̄k̄²r̄v̄gn̄0 C| ḡff ki n̄k̄^at̄»r̄ci
o w̄ w̄o^a p̄ n̄w̄q̄p̄cū^a i qv ku h̄gn̄^{3/4}m̄m̄ c n̄gtgul v̄p{gm̄
n̄gn̄< g| ugo v̄gul km̄ uqm̄ go d̄gtp̄gm̄ j k̄^a d̄c j k̄f ḡvk² r̄/
r̄gp O w̄l v̄hc M̄o k̄ k̄ t̄pci { ku c u| c̄m̄p̄k̄k̄ j̄gn̄ t/
u²i d̄gp c j̄cf ugt̄gi t̄gh̄t̄o l^a p̄cm̄ c| q̄p̄p̄c̄r̄k̄ u| Ām̄²i gu/
u²i²v̄0 C| š̄w̄p̄k̄p̄k̄v̄^a n̄ō v̄^a d̄q̄tc i {²t̄Ān̄ c r̄dgt^a r̄kuq̄n̄^a
u| cr̄qt̄q̄f k̄n̄0 M̄c̄r̄r̄qu. h̄g| p²m̄Āk̄ h̄²th̄k̄n̄ev. h̄²v̄{q̄n̄/
| c̄w̄cp p̄ n̄gv v̄^a o c f o gi c m̄Āk̄^a t̄quq̄n̄d̄cp c d̄ki q̄w
eu euḡr̄n̄0 O gi c̄r̄m̄m̄ c š̄O q̄j co ḡf^a p̄ N̄ki c̄ō C r̄cr/
u^ai. m̄Ā^{3/4}v̄^{3/4}gp̄ c n̄k̄ugdd r̄cr̄u^ai. c j̄q̄f| u^a m̄ n̄g| f̄go²/
p{g| v̄n̄0 C o ci c̄ūc̄d̄d̄t̄c̄pi Ā n̄²r̄| ḡw̄gdd r̄cr̄qm̄ c|
w̄²o^a m̄ c š̄j̄ q̄m̄> i k̄c f̄q̄m̄q̄t̄c̄k̄ō v̄^a x̄q̄n̄ v̄t̄v̄q̄w̄^a m̄ o c/
i w̄n̄ev̄c r̄k̄^a »r̄o

C j̄gn̄| ḡv̄ h̄q̄tt² u² u² t̄km̄ C| ^{3/4}gi M̄co k̄n̄ t̄ḡp̄f̄ ḡv
c̄n̄et v̄t̄go v̄ḡpk² u gi { u|²r̄ p̄cr̄qp̄ x²i t̄ḡ nk̄ c̄n̄et̄c
v̄gu² n̄ḡip̄k̄ c n̄q̄to^a p{d>n̄ c v̄Ā² » o k̄p̄k̄u| v̄t̄ḡn̄ḡv̄0 C|
w̄p̄k̄p̄k̄v̄^a m̄² u c r̄dgt^a r̄kuq̄m̄ ḡt̄tḡ p{Ānc̄p^{3/4}u| ḡeuc̄r̄p̄c̄n̄0
U v. o k̄ v̄^{3/4}d̄. c f̄^{3/4}p̄v̄ r̄c̄t̄r̄o ḡp̄vk̄ Ā²r̄ u t̄gi i ḡr̄p̄ Ācdd
r̄w̄eu t̄q̄d̄d̄cp n̄k̄0 C M̄qo k̄²/go d̄gt̄gm̄ p²j^a p{u|^a | cp.
h̄c̄v̄n̄ v̄k̄u| v̄gm̄ d̄gt̄q̄j̄ c̄p̄p̄cm̄ c r̄c̄t̄r̄o ḡp̄v̄d̄ḡ0 O w̄l v̄hc
M̄go^a n̄ p̄k̄p̄euḡp̄ n̄^{3/4} v̄Ām̄ d^at̄ p̄go t²i gi { v̄^a x̄q̄r̄edd̄k
u| q̄n̄^a r̄v̄k̄ Ā^at̄>n̄ U| c̄m̄p̄k̄k̄k̄d̄ḡ j̄c| c̄k̄p̄f̄ w̄k̄c. M̄q̄p̄w̄cp/
v̄p^a r̄q̄n̄{d̄c² t̄nḡ| ḡw̄0 ô C v̄ḡpi ḡt̄gp̄ h̄ḡp{gi ḡv̄ n̄gi j̄c/
f̄l̄j̄ c|>m̄ x̄q̄p̄w̄p̄cm̄ h̄gn̄ ô² u gt̄ j̄c̄w̄m̄q̄o o c̄n̄ r̄go q̄p̄f̄ c̄v̄
l^a m̄ c n̄q̄to^a p{ḡp̄^{3/4}n̄^{3/4}0 C u| w̄n̄^a p̄ p̄go o gt̄. u v̄ v̄c̄ī p̄
p̄go ku c̄n̄et o²i p{Ānc̄p̄ u| p̄w̄c̄m̄p̄k̄< ḡn̄ḡp̄n̄ḡ|² u
p²m̄Ān̄ c̄r̄^a f̄l̄c̄ c| Ā o k̄p̄k̄u| v̄t̄ḡp̄^{3/4}m̄ J w̄u| ḡk̄p̄ J k̄o k̄
r̄c̄uc. c x̄q̄n̄v̄ h̄q̄t̄t̄c̄f̄ c̄m̄ k̄ o c̄eḡf̄> p̄k̄ck̄ n̄q̄to^a p{| » n̄k̄p̄ḡ/
x̄ḡ|² u²v̄0 C h̄c̄v̄n̄ v̄k̄u| v̄n̄et̄ f̄l̄c̄f̄ c̄m̄ c̄ūcp̄ h̄gn̄l̄l̄q̄pi < u/
n̄gt̄Ān̄v̄ o gi x²f̄ ḡpk̄ c M̄qo k̄² p̄ḡj̄ ḡl̄ ḡp̄ n̄k̄^a x̄q̄w̄ v̄Āu|
n̄^av̄0 O w̄l v̄hc M̄go^a n̄ t̄quu| c̄r̄k̄c̄ eū>x^a r̄c̄ h̄ḡl²v̄. co k̄
n̄q̄t̄ M̄q̄p̄w̄cp̄v̄p^a r̄q̄n̄{d>n̄ p²j^a p{ p̄cr̄ o Āk̄c̄ Āp̄cm̄ k̄p/

fwn U cmqpkndg. wflc. jqi { c rweu n^wtc gm^gpu²/
 i gkm ku j cpi vcrpwn ¾u| v³p³ugp gi { uqtdc hqi pcm v³/
 o fpk0 Mgo^a rpcm ki c| c ku rgw< c tgcnek» o²i gi {/
 ul gt ¾uu| ghqi² u gi {ul gttg gnuko wpcm n³4 v³m c| gf/
 f ki k nkugdd/pci {qdd^a tp{crcvkm³pdu²i gn0

C n³4 ¾u xgu|²n{ n^wtc vgj^av r²vtgl³4v c| gi {/
 u²i gu šMqo k²/gm^gpguō htqpv ku0 C rkdgt^a rkuqm< o quv
 o²i pci {qdd cmkxk³ utc j cv³ tq| |^a mgno ci wnev0

Gi {gn tg c| qpdc p o²i pgo vctwpm kv0 O quv
 o²i eum c Mqo k² ²u c rkdgt^a rkuqm dgu rqrkknck
 xkj ctek f³pcn0 C| gm^gp|²m ul gtxg| ngf km ²u eum
 Ācdd cmemo tc x^at. jqi { n³4 dgp o gi p³4 gm^gf gw ²u
 c ul wv³p^a nen o quv o^at vkqndcp gt ugp v³o qi cvqw
 gtgl²v o gi o wcvj cuuc0 Cdf wn J co kf ô {kf k k o c/
 i^a p{^a dcp ô o kpf gpmkxgn ul x³gugp ¾uu| g^am jqi { c
 i { n³4v khl³4³4m Mqo k²v o gi dwmcvj cuuc0 Kgf f k³
 o kv vt>»p³4³n³4 ²u U gdcj gffkp vgtxgk n xci { plpeu.
 xci { jcvcp ku. eum ki gp j qo^a n{qu wf qo^a uc0 P go
 v³4 fkm xgrg= grj co ctngf qw r²r²u xqrpc o quv. co k/
 nqt o²i n³4 xgvrgp xgu|²n{ pgo vgu| k kpf qnqn³. c
 Mqo k²/gm^gpgu htqpvv hgtqddcpvck0

O kpf gpgugt g dk qp{qu. jqi { c ul wv³p c o ci c
 t²u|²t n ô j kul gp »tk uk xci {qpc xcp ô o kpf gp gr²/
 i gf gvrgpmgf v ²u ul²vj Ā^auv v³o qi cvpk hqi. cp{ci k/
 rci ku0 G| r g f ki f³pv 0 O wu| vchc Mgo^an c ul cmqpknk
 cn tpci {. ²t| k wflc. c Mqpuvcpk^ar qn{dcp rgi w»dd
 n^wqvcw »v. ô jqi { xcrc o k pci { gt rt>d^a pcm o²i
 l³ppkg ngm0| u gn²t| gv² pgo ku eucrlc o gi 0

P {wi cvqp 3; 2;/gv x³pcn0 Gi { ²x ugo vgn gn
 c šx²tvrgp htctcfemo õ »vc0 | u o quv o gi kv gr²i
 gi { ul knic. ²r Āi {. o kv eppcnkf gl²p P lc| k dgl lgrgp/
 v²mgrgp gi {²pk cnck»lc. jqi { c rckpc grkpf wlp0 C
 nkx^an» qnqv o quv J wu| glp Hgj o k dglpgm j x³l^an0
 U Āng nku Āu^ai ul gtngul v 0 Xerc o k »nqpl gtxcv³
 k^ap{Ā gi {j^a| kci v³o qi cvqw rcr qeun³v euk^an nku
 r^atu| qd^au ul gtngul v u²i dgp0 C rcr. rgtul g²rgugp v³/
 o cflc c| khl³4³4³4ngv0 fncpf>»cp ngmgo gvrgp ul g/
 o²n{k fqi cnkv ul gm| vgv0 Gi { ²llgn c| v³p c i cr/
 vck j x³q Hgj o kv j^a wwt>n qtxwn rgr³xkn0 C nku ul gt/

ngul v qw c jgn|ul ppgp nkgj grk rgnf v0 C vgwgu ô
 nk ngj gv o^au. o kp v kl^{3/4}kl^{3/4}m^a ô pgo ngt[~]an uqj c
 gn 0 C| gmgp|²m²u c rcrufi c nqto^ap{v x^afqlc.
 co k²tv c d p^{3/4}lv hwpk jci {v³n0 C vgo g²u ô gl gt/
 p{k j qf|uc²u wf^oc ugi²f rvgv o gmgw ô »tk^auk r q/
 rkk²ck v[~]apgv²uu² hclw0 C ul wn^ap gpi gf²n{v cf. jqi {
 c ul gtngul v v o kp v²rrgp c| kl^{3/4}kl^{3/4}m^{3/4}m^ancn jkf g/
 vgw [~]Al uclv^ul cdcfufi gnu x²tvcpl[~]av c f[~]ul gu Ocj/
 o wf/[~]V[~]Ad²dg vgo guu²m k0 Ocj o wf. Cdfwn C| k²u
 c v^{3/4}dkl qtu^ai pci { nqrqtu»lc o gn²0 Vknqu ngl gm
 t^{3/4}ktcvqnev qu|qi cvpcm c pci {qp ku p{wicvku tg/
 hqto qm»n o²i j [~]Å »fq| » p²r n^{3/4}kl^{3/4}w[~] vctwv wn[~] p^o g.
 c| [~]Å wcm gffki o^auv ugo vgwgm o kp v ucl^av |ugd/
²u^a n^au²j²i [~]Angv grfi [~]lgw²m nk0 M^{3/4}dgp c| qtu^ai
 vt[~]Angvngv xgu v²u hqn{vqp ul gi²p{gf kn0 C n^{3/4}rqp[~]
 ni k^ap{[~]q^w vknqu rtqr cipcfc i qpf qunqf km c jk/
 d^am hgrpci {[~]u^at»n²u c p²r nk^adt^apf[~]u^at»n0 J^atqo
 j»pcr ku crki vgrkm gn c| wqn» Mqo k²/rweeu »v.
 co gn{gv Mgo^an ku Mqpuvcp^arqn{dcp²rv x²i ki ô
 co knqt 3; 2; ^artklu 35/^ap. nqtc jclpcndcp gr²tngl km
 c| gmphqttefc enqo nk^{3/4}u²pgmr gteg0

C ngi²p{u²i c neul^atp{^and»n tgi ign jcv »tc
 hgr² nkxqpwn c nqpuvcp^arqn{k we^antc0 Cdfwn J c/
 o kf c o ci c go dgtgkpgm h ngi Pcfk Ci^apcm²u
 pgo wqn» uqtdep ucl^av hclpcm ugi [~]u²i²xgn c j^av
 v²tdgp cnr qucp o gi ul gtxgl v^g nevpckci c| gmgp/
 hqttefcwv c0 C nqpuvcp^arqn{k jkfcnev. c h x^atqu
[~]Av gtgkv ngi²p{u²i |^atv gn0 O kpf gp[~]Aw^ai {[~]Am²u i²r/
 r wun^an0 C| kl^{3/4}kl^{3/4}m vku vgm o gi n^{3/4}kl^{3/4}xg jgxtpgm c
 neul^atp{chqi f^andcp0 C nqpuvcp^arqn{k gnu jcf/
 vgv j Au| gl gt go dgtg dgv^{3/4}nk U| wco dwn we^ak0 C| Clc/
 U| »h^ap c rt»l²vc jcvno cu |^{3/4}f nqdq| »lc npi 0 Mwf
²u o^au hpcvknwu eucrvqm ngtgukm j^arfpc c rqi^ap{
 xcm^aucrcp kl^{3/4}kl^{3/4}m rqrkknwucnev0 C p²j^ap{u^a|
 gnu^apv vku v kvj qpo ctfv t²u²v r gfkⁱ ghqi lem
 o gi^{3/4}km ô cnk wf n^{3/4}kl^{3/4}Am o gpgm[~]0 Eucm c| qm
 ngt[~]Ark^m gn c xgu gf grv gv. cnkm gddgp c| kf dgp Oceg/
 f»p^kdcp. c| kl^{3/4}kl^{3/4}m hngi x^at^adcp vctw| nqf pcn0
 Hlcvn vku vgm vj^av ugi qn ugo r³vjcv»n[~] euwv c cnku v
 vx^addu| qn^an». to guvtd n ngw fgtgubgl x²p jcf/

pci { ô c j wu| qpp²i {²xgu khĀ^{3/4}m xg|²tmetk ncr k
 v̂p {qm j cr̂ nqu gmgpu²i gk²u kki {gk ô xg| gkm c euc/
 rcvqncv̂ U| gtgpeu²l²tg O wu| vhc Mgo^anv gl c x²/
 tgpil²u U| cmplknkdgp vcr̂ rlc0 J c o²i r^at j »pcr ki
 Mqpuvcpv^ar qn{dcp o ctef. dk qp{^atc c| hglg ku
 i wvn²u c pgx²j gl h | f gi²u| nqtu| cm vcr̂ p gm c/
 tcf vxqpc V^{3/4}nqtu|^ai v̂⁴v̂ pgn²d r0

C| gmgphqttefc mjo ul kpv̂g i qo dp{qo^autc o m/
 fkn0 C| gffki ĥrtg^an̂f̂q̂w cdf wj co kf k xg| gv m rgt/
 egm crw Āqppcp^axgw rctcpeupqnk j gn{gkn̂p xcp/
 pcn0 C r̂i²p{u²i pgn c| gmgiv p²j^ap{ j »pcr o^at pgo
 xqiv gr̂i. j qi { t²i k wtckm cte^av²u rctcpeuqn̂ j cpi /
 l^av gr̂gr̂lvug0 C| khĀ^{3/4}m̂^{3/4}m Mqpuvcpv^ar qn{dc xg/
 |²p{gnv gr̂ki^atf^alc. c U| cmplknkd »n^av j gn{gl gw gi {gv
 r̂p xcf^au| gl tgf ku. r̂w^ap c v̂r̂gt v. t³/k̂f gusp r̂v̂gu| k
 c hgi {xgtv. u v^av^atqr̂0 O k̂vj c c t²i k n̂vqpcgn f^{3/4}m
 c l̂pleu^atqm r̂| cf^auc kuo²vn fp²m o gi c Dqu| rqtwu|
 rctv^ap0 C r̂| cf »m xg|²tg c i^{3/4}3/4 xgt Gf j go rcuc0

rgu| c| Ā j cf Āi {o k̂ku| vt< c eucrcvqm kuo²v hgn/
 xqpwpcm c h x^atqu dgnugl²dgp. ctte c j f̂t̂gu go gmg/
 f²ugp^am v̂ttg. c| Clc U| »hc²u c rctncv̂ gpv gr̂0
 šWnko^awo dcpō n̂³xgv̂r̂km c ul vn̂^apvn̂ o quv o^at c|
 gi²u| nqtu^ap{ gn^axq̂r̂v̂^au^av̂0 C ul vn̂^ap ô r̂i wu| »ri
 pgj gl gp ô dgr̂ggi {gl kn0 —hc c tgn̂ek̂u. 3/4gi Mlc/
 o Ā r̂gu| c pci {xg|²t0 C ul vn̂^ap o k̂f gp̂k̂p̂gm co pgul /
 v̂^av cf ô o k̂f^{3/4}u| g p²j^ap{ ĝzr qp^anv khĀ^{3/4}m n̂^{3/4}/
 v̂m c nqtu^ap{ncr n̂³r xkugn /h ul gtngul v lg. ô
 c| ctd O cj qo gf Ctu| r̂p. gi { xcn̂^af k uk̂x̂v̂i k go f̂t̂.
 gukm^ar̂f q| cwn c| gmgphqttefc mjo f̂Ā²pgn0 C| gmgp/
 hqttefc mjo o^auqf km per l^ap c| v̂p P c| k r̂cu^av pg/
 xg| k nk c ul vn̂^ap c| gnu. n̂qpuvcpv^ar qn{ k j cf v̂gu
 rctcpeupqn̂ pcn0 G| c j cf v̂guv xcp c h x^atqudep< gl
 f^{3/4}v gn o k̂f gp̂v0 P c| k tgp̂f̂v ku euk̂^an c r̂| qpi »
 n̂^{3/4} n̂v̂q̂p^an#n̂^{3/4} v0

C r̂i²p{gm c| gm Āv n̂³v per crw o^aul²m kn̂k̂
²rgu rctqpv n̂³x^{3/4}f^{3/4} v̂gm ul²v U| v̂o dwn ŵe^akp0 Tgp/
 i gv̂gi^atv̂v̂p go dgt u²t Āv̂ o gi c ul gtv̂eucr n̂qf »
 i qn{ »m̂r̂0 Mqpuvcpv^ar qn{dcp. c h Āx̂qpĉr̂n̂q̂p. cr̂ki
 o ctefv²r cd̂cn0 C| kf gl²dgp gm gpgm Āv̂ p²j^ap{ khĀ
 v̂^{3/4}m̂ku| vr gf ki j cto cf km̂per gr̂²tg U| cmplknkd0

KZOCdf wuJ co kf dwnt uc0

U crqpkndg c u|wco dwrk gmgphqtctfcmqo j¶g
eucm jcto cfper lwqw gr0 C u|crqpkndgm n^aw^am jqi {
pkpeu xgu|vgpk xcn» kf 0 C 50 jcfvguv ^am^aqo ^auq|qw
kw0 C jcfvgurctcpeupqm Ocj o wf Ughngv rcuc. o c/
icu. uqx^ap{. o²n{gp^Ån u|go cted cu|n²vc. ô v
vtvqvc cpcnkf gl²p xqp fgt I qn| rcuc c ngi vjgv
u²i guggd v^{3/4}m v³dqtpqmpcm ô ^{3/4}u|g|¶xcwc c| ^{3/4}u|
u|gu gr²tjgv vku|vgngv ²u u|»u|gtkpvc n^{3/4}kgvng| dg/
u|²f gvkp²|vgj q||^alwnκ

ô Dclv³tucn# C Mqpuvcv³kp^arqn{d»n ²tng| j¶
tgm o quv o^at xkf i qucp o wcv^anκ c f gurqv³o wu
o gi n¶²tngv. jqi { hgn^ao cuu|c ^{3/4}po ci^ax0 C| Ål nqt/
o^ap{v v^{3/4}x²p{vgrppgm vctvqo 0 C h x^atqu ^{3/4}u|gu jc/
w^ui ckv ²tvu|vgwo. jqi { jcfvgu^Åpm c|qppcn Mq/
ucv³kp^arqn{ gmgp kpf w0 D^ato kdg ngt^Ån ku. c| cmqv
o^ap{v xku|c^an¶qo 0 C| ^{3/4}u|gu kp²|ngf²ugngv o gi/
vgwo 0 V rgvgm dct^avko. rgfki hgn²vgp gpi gf gn
o guu²i gvn^{3/4}kgvgrn0

G| xkf i qu dgu|²f xqn0 C vku|vgm Ål gum^Åv vgu|/
pgm o quv Ughngvpgm jqi { gpi gf gro gungf pgn0 J w
u|qpgi {gf kn²p kpf wncm gn ugd²dgp c xkf²nt n U c/
nqpkndg ^{3/4}u|rqpqv¶qw eucrcvqκ c šJ ctgngv Qt/
fwu|w0. c šHgn|cdcf¶» J cfugtgi gn0 G|v c pngxv c
vctv» nqf» o qfqt^Å u|^Ångul go. u| mu|cx^a cn t/
pci { . O wu|vchc Mgo^an^{3/4}ng²d nner vc gl vc jcfugtgi 0

O wu|vch c Mgo^an U crqpkndgp ²tv³ c tkf»0
Co kpvc c| gnu. u|kpv^ai {^Ånd»n hgrtkcu|vqw h x^atqk
dclv³tucm o gi²tng|vgm o kpf gpf²rg wcknqj U crq/
pkndg ²u c Miku^an{rcqv³dcp gro qpf³m c v^{3/4}v³pv/
ngv. Mgo^an tqul ^arcv^a n^awc dgvrigu^Åpk0 O gi ugl/
vgwg gn tg# C f^{3/4}pv ngu|^ao qn²u o²i eucm o quv hqi
gr²tng|pk0 Cdf wu J co kf. c X^{3/4}^{3/4}u U w^ap hgn^ao cfv
c t²ik gmgp²i gt ugddpgm ²u xgu|²n{gugddpgm dk q/
p{wv. o kpvc gmgphgrk xcrjc ku jkw²n# C f|ugj gppg
^{3/4}u|gu rcnκ Åtc hgn|cdcf wncm ²u c tgenκ d^{3/4}/
v³pg. dk»lc Åtc qw n¶²tv. c o^at u|cdcf pcm jkv
^{3/4}u|ggum^Åx m ²rgvg hgrw# Kw u^Åi ugp eugrngf pk

ngm eugrngf pk vrdgu gt d n o gtv o ci^at»n c| ²ngv/ t nxcp u| »0

O wu| vhc Mgo^a n c Mjpuvcp^arqn{ grgp xqpw» j cf ugtgi gi { km Àqppcp u| gtxgl gw j cf qu| v^an^a pcm ngul xgl²tnetk h p³/ng0 Gi²u| per. gi²u| ²llgn hqn{ km c xk²nt n²tng| eucrcvqm tgpfgl²ug. ^aveugrqtvu|| v^auc. VĀ²tu²i gv. nqxcuqnev qu| vpcem dg0 MĀrf³/pe³/m hwpem O wu| vhc c Mgo^a n ugdvdgp hgn^an||qw ktqf^al^a/ d»n c h rctcpeupqñj q|. Ocjo wf Ughngvj gl²u c v³/ddk j cf qu| v^an{ rctcpeupqm^ai xgl²tnetk ktqf^al^adc0 O²i ctte ku xqrv kf glg. jqi { Ocjo wf Ughngv jgn{ gw nk^anx^ap{v hqi cm c| qp o gi Mjpuvcp^arqn{ rncquck u|^ao^atc0

VĀpf²tki {qtucu^ai i cnvcr qp^amc eucrcv0

Kpf w^au Mjpuvcp^arqn{ hgn²0 C f³/p^vuv pgo ng/ j gvqx^add j crcu| vcpk0

C šHgn| cdf ¶»ō j cf ugtgi Āpcm kpf w^an0 C o g/ pgv ²r^p qw Āi gv O wu| vhc Mgo^a n u| Ātng. v^adqtg gi {gptw^adcp. netffcn tgxqrkgtgn qrfcñ^ap0 C x²i g/ r^avj cvvcp netcx^ap r qfi {^au| cn u| gtnqeu^km^{en}= xq/ pcvp. n³j^avq. vj gtnqeu^kmqp xqpw^a c h x^atqu hgn²0 C h²gtucr n^au o gpgvpgm pgo ku cnetv x²i g u| cnef/ pl0 Cpi qn u| go vcpwm o qpf^am j qi { c hgnqpw^au p²/ o gv rqpvu^ai i cn v³/v²p^v0 J wu| qpngwgf kn²p ²t^vm gn²u |^at^vm n³/4Ān Mjpuvcp^arqn{ v0 C Eucvrf| uc/ xqpcn c Dcm^ap hgn² Mjpuvcp^arqn{ mwæuc o^atku c| ³/k²mxqm0

Hgnqtenu| xc x^atlc o quv c j cf ugtgi c vctvcr^am dg²tngl²u²v0O^aupcr o gi²tngl gwc| ku0

C hqvqu eucvrf| uck mwæu^an^auqnev c u| cm^apk^angm x²t p²mĀn eugngn u| gtgl v²m o gi0 Mgo^a n²u xgl²tnetk vku| w^atuck c| ³/4³/v n xcn»u^ai i cn wllqpi vcn0 ¶| { v³/4/ v²pvgl <

F²nw^ap c nqpuvcp^arqn{ k rctmco gpvdgp Ār^au xqn0 C n²r xkugn j^a| w| {cpku^ancp^a»cp vcp^aeu/ nu|^auqnev hqn{ cvqw0 Gi {u| gttg eucm nevqpcu^ai lg/ rpv o gi < c n³/4 grk j cf go m lk c h x^atqu»n o kvgi { jcto kpe³/ankqo²vgttg hgnx x^atqu^adcp^amqo^auq| » jgn{ tu²i xqpw^a hgn0 Dgu|²rp^k »j clvpcm c n²r xkugn / j^a| gp³/n²xgr0 G| ngu^am c| go grk²p{t n²u dgu|²fdg

gtgul ngf km c j cf ugtgi ul »pqm¹xcn gi { j cwxcp²xgu.
hgi²tj cl^À tpci i { c¹0 C| tpci { ul cxckd »n nkf gt^Àn
j qi { c j cf go m lk g| tgf kw^a m tgpfgmg|²utg. n¹ul gp
c| wtcmaf »v²rgv²u x²tg^at^ap o gi x²f gpk⁰

C| grp^{3/4}m o gi xcp j cwx c²u euqf^amq| kn^c o kn^f gp
pck²u fgt²m^{3/4}gi h^kAm g| gn# M^{3/4}ul³/pk j u²i ^Àngv. fg
c| qtul^ai i cn²u c ul wn³ppcn pl^keu ugo o k dcl= p{w
i qflcpem o gi 0 Kgp l »n²t| k o ci^av. ô²u m ô c
n¹r xkugn m ¶²tkm j qi { o clf c l^{3/4}k dgp ku o gi x²/
fgro g| kn⁰ C| gl tgf gttg xku| co gpgvgn c r^an{cwf/
xcttc⁰ Qw c| qpdep c| c o gi rgr g²u²tk j qi { ^Àgu
c u¹p= pl^keu lgn²u. pl^keu xqpcv j c| chgr⁰ Eucm o^au/
per ô c eucr cvqm o²i o kpf ki qw³ dqtq| pem c r^a/
n{cwf xct o gmgwô fgt^Ànnkc xcn »u^ai 0

J cf go ml hqpvu xcu^Àvk i »er qpv c Dcm¹p hgr⁰0
C ul cm¹pk¹kk v¹ul vgm vknqu det^avek c j cf go m lk v¹ul/
v¹net p²j^ap{ h^kevr¹c. c ner qw wcu¹¶³uj q| j ¶¹xgp.
gn| per t^ak¹gu| vgw c f l^kpcu| vknw²t| gro^{3/4}gi j c/
f go m lk v¹ul v¹ntg. j qi { c ul wn³p²u c nqto^ap{ xg/
u²n{dgp xcp< c| qppen kpf w¹lcpem o gi x²f²u²tg c h/
x^atqudc=0 C v^Ànm j quu| cu vcp^aeunq|^auqm w³p ukng/
t^Àv ku< c J c| ckf j q| j gl tgf M¹quvcp¹kp^ar qn{dep
tgn¹f v⁰ C ul cm¹pk¹cm r g¹ki xk^ao cp. netfeur^au
p²m^Àn lw¹pcm c hqpvu nw¹eux^atqu J cf go ml dktv/
m¹dc⁰

f r tkku j wu| qpj cto cf kn^c r²pvngt¹ gukn⁰ C o q/
j co gf^ap j gv^k ^Àppgr²tg⁰ C ul wn³p. o k¹vj c o k ugo
v^{3/4}v²pv xqpc. ul cd^an{ul gt gp. pci { rgn¹kt xgn o gi/
v¹tlc ul qn¹uqu ul gn¹o kn¹^av⁰ Fg gl c per pgo j q/
| qw ^Àppgr gv⁰ Xci { p{w i qf cno cv c ner¹kk ul^ao^atc⁰
K⁰ Cdf wn J co kf² lgn/per ren hgpp xcp²u k¹v²| ngf kn⁰
U go²n{gugp o gi { . v^{3/4}ldu^{3/4} per l^adep ku j i^atf^a/
l^aj q| 0 C i^atf c v²p{rgi j c| wtcmaf »j q| = co kn¹t
gi {ul gt pgo t²i c ul wn³p nku² n¹u p l^{3/4}v rg c ul g/
n¹o kn¹j q|. j c¹n¹cn hgp{gi gvgw o gi o k¹fp gp w¹xctqp/
eqv. j c l » w¹wn¹pcm j clc ul^arc i^{3/4}d^Àn⁰ C| »tk¹ugt/
o gv cnd^apqm²u m¹w¹fqm per qpv pci {ul^ao ^À v^{3/4}3/4m
hqpqv ner pcm ctep{dep²u rer ¶¹dep⁰ Vgrg xcp xgrg
c |ugd^Àn⁰ C [kf k l^{3/4}3/4v. cm¹up{cw »n pcr ngn²ki.
»tk¹uk l²p{ul »t » n^{3/4}4^{3/4}0 W i {cp gl gp c per qp. j wu| qp/

j cto cf kni p. c n74 grk Ucp Ughcpqdep. c| kf gl² dgp
gno gpgm²u o quv c eucr cvqmⁿen xku| cv²tv v^{3/4}3/4m
n7r xkugn m gi { v^{3/4}gf²ng šeuqpn^e rctico gpv²gō vctv
2u<Cdf wnJ co kf rvgx²u²t n³ti { crf0

Gi { eucn³fk vcp^aeu. c| Q| o^ap/j^a| d²rk j gt/
egi gm u| p^rcf kcu kpv²to gl| »lc pgo wf²lc c uqtu
ngtgn²v o gi^a n³cpk0 C u| go²n³gu | uctpqm^ai pcm
o quv o^at dwnpk ngn0 C d^apcv n7u k= c dg/
d^{3/4}v^{3/4}p| 3/4w. v^{3/4}pntgv²w. o gi^{3/4}w. nkx²i| gw. t³A
rgvdg ngti gv²w^a rf q| cvqm v^{3/4}o gi g. o^at gn tg dg/
ng²vc c Mku| o gv n7p{ x²dg nkqo n³ n7pp{ x²gn
2u x²t²xgn c n7p{ ³A x²i| gv| gt dwn²u^av0 Gtt n
i qpf qun²f pcm c h x^atquv n74³A³gx Hgn| cdfc p³»
Eucr cvqn0 O wu| vhc Mgo^an per qpv xk²ui^arlc tgxqn²
xgtg v^{3/4}n²p{ v³t^av< pgo rgj gv wf²pk qutqo rgu| /g.
xci { ner kwn²ek²A

Co kv c j wu| qpj cto cf kn²ek j gtegi k vcp^aeupcm
x²i gu| cncf v. c ugkn²A²k²n²ko. cnk gffki Cdf wn J c/
o kf r^atv^ap xqnx u| go²n³gugp o gpv nk ô u²tj gv²v
ngp h rcr ô c x^atquv n74³A³gx o ci curvqn²p^am³
kl³A^{3/4}3/4n^{3/4}n^{3/4} 3/4 v³ti { cnpk0 C| Av gtgf o²p{ vngp o c/
tcf v0 C ugkn²A²k²n²o ³Agu n7|| gn v²tv j c| c0 O^aupcr.
j wu| qppgi { gf kn²p² llgn c eucr cvqm gi { u| gt gp o gi/
ng| f km c dgxqpwn²uv c x^atqudc0 O wu| vhc Mgo^an ku
c| gn tgv^{3/4}3/4m n74 v xcp. netffcn rku| vqn²v²un²xcn
qrf c²p0 Gn tg nk²qni q| qw vgtx u| gtlpv j c²rf pen². n7/
r²ut n²r²utg0 Gi { gu hqv²qucdd utcv²i lek rqp²vnev
tqj co o cn ngm ghqi ncpkwn0 P²j^ap{ gngp^am³ neu^at/
p{ c cdren²d²n nkr wun²| qw. x²tgu. x^{3/4}3/4hg| gu šcu| n²/
tknō. n74 nev²p^am dwnpcm nk ô j c²n²rtcv²n²kc. c|
³Avgutg0 C x^atquk j gn{ tu²i | 3/4 g c| qpdep. c| co/
pgu| vc dk²vu²p²uc w²p. o gi cf²lc o ci^av0 Hgi { xgtgkv
ng²xg. grkqpwn0 C u| crupkn²ku| vgm o²i o kpf ki x^am/
t>| u^am nk²Apv²ugm t²pi lgn²ugm p²m²An tqj co q| /
pcn0 G| gngv. o²i c n74 nev²p^am o gi p{ gt²ug e²n²d²n
grkpf wn²uqm gn w xgw²m rg. u^{3/4}2 vn²m²u u| ³An²u u| p²
| vddqp{ ckn²»r0

C h x^atqu »t^amrgh²ti^a u^ap dgn²nc| kl³A^{3/4}3/4n^{3/4}n^{3/4}0

C| qpdep c. i { | grgo o²i pgo vgr²gu0 C| »tk²uk
x^atquv c| ³A go dgtgm nev²p^akpcm v²| g| tgk u^an²m

o gi < fg c| qtqu| n¹p dctrpi l^aj q|. c [kf k| j g|. o²i
 v³xqt»n ugo u| cdcf c| À0 O^at r g f k i o k p f g p n k w f /
 v. j q i { c [k f k| d g x g j g v g r p 0 N g i c f d d k u p²j^ap {
 j » p c r k i u k n g t g u g p x²f g m g | j g v 0 G p p k x c n » d x g p x c p
 k w h g j c m q | x c = n e u |^at p {^ak d c p ¶ | g | g t g n u |^ap v. r q o /
 r^a u c p h g h g i { x g t | g w² u j c t e k | c d q p v c t v q w. x c f .
 e u |^at k i^a t f k u c v c p {^a| k n 0 C u | w n |^ap k i^a t f c g r f v c
 o c i^a v c u | w n |^ap e u g p i c t e p { c k² t v. f g o q u v v k u | v g u /
 u² i i g n^a n l c k u c | Æ r g v g v. c o k p v c | t g p f g u | u q r f q u u g /
 t g i j g | k n k n 0 G | g n g v c o g i x^a u^a t q n v² u o² i k u r m g u
 v g u v t³ / n g v. 3 / u | g u^a i { Æ m m e n u g o h Æ u³ / 4 k m n k c | k l Æ
 v³ / 4³ / n³ / m g i { j c o c t 0 C | q u t q o r g f k i x k f i t c u | » » d q v
 t^a p { r e p p p 0 C | g i² u | c n e k » u k n g t² v² u c | Æ | t g p f u | g t
 v n k p² n² v v g j g p² n u e n^a t c. j c k^a k i g p i g f g m h c l w p k
 c f q n i q n e x 0 O k v u | » p c g j j g | c x k f i² u c |² t f g n g k v
 j c v c m c m A | u g i {² d u | g o r q p v q m k u x c p p c m c o k r e p /
 p g c u | w n |^a p p c m c [k f k | n e | c o c v^a k d c p t |³ / v n³ v
 g | g t k l Æ v³ / 4³ / m h j i n^a x c n v Æ u |^a x c n A J k u | c | w q n »
 p e r q n d c p o k p f g p i { c p Æ u g o d g t v g r h q i c v q w² u d g x k /
 v g v g w c u | w n |^a p 0 U v. o² i u c l^a v n g i Æ c d d c p n k p g x g /
 | g w g n g p h q t t c f c m k o k p k u | v t g k v k u c t t c n³ p { u | g t ¶
 v g w g. j q i {² l l g n c r e m v³ d e p c n f l e p c n 0 I { c p c n u f q w.
 j q i { c t g o² p { v g r p j g n | g v n^a w^a p j g o d g t g k v k q m
 d c p g u g v g i g i { g | n g f p k c n e t p c m o c l f c | k l Æ v³ / 4³ /
 n³ / 4 m g i 0 C m m t j^a v e u c m n g i { g p g m g l g m c | w t c m c r e r q /
 u c p q f c n^a p e q r k c c u | w n |^a p g n u Æ m | g f e u » p c n^a j q | #

O c j o w f U g h n g v i g p g t^a r k u o k p f g l v k i g p c n r q u c p
 o g i j^a p { v c / x g v g w n e v p p c k² u r q r k k n e k x g l² t n e t^a /
 x c r 0 O w u | v h c M g o^a n k u q w v c p^a e u n u | k m v³ / d d u |³ / 4 c
 h x g l² t t g r 0 P g o . c u | w n |^a p h g n g i x^a t c g n g p p g o r g /
 j g v h e r k q p w p k 0 C d f w n J c o k f g r t q p v q w c w i { c p c f q n
 i^a v c | | c n j q i { » x e v u u^a i d » n h g f g | p k c n e t v c c j^a v^a v
 k u² u p g o o g t v g r e k p v g g i { k m m Æ f l² n r^a t v^a t c u g o
^a n p k ô f g j c C d f w n J c o k f j c v³ t q | v c r p k u x q n v
 p g o w i t k m g c p { Æ n c x c f^a u | c t e^a d c k u. j c x² i n g i
 o g i u | q t ¶ |^a m A O c j o w f U g h n g v g i { g n t g p g o u |^a p v c
 t^a o c i^a v c | q u t q o t c 0

M² u² i p g o l² t j q | |^a. j q i { c x³ / 4³ / u | w n |^a p n³ / x g /
 v g w x q p c. j c c | k l Æ v³ / 4³ / m u g t g i g n³ / 4 g r f k m c ¶ | o² /
 v g t p² n o c i c u d d² u v³ / d d³ / 4 p { k x e u c i . u | Æ » u e u g t² r /

hgf gn dgvphecnj q| 0 C o ci cu [kf k vgw²t n Ai {
r^au| v¹| c x²i ki. ô m²pdgp ku c rgi o qf gtpgdd hgi {/
xgtgkxgn²u^ai {Àxcn ô c vuv tu²i c| cmt>n tqj c/
o q| » dcm¹pk dcm¹nev. j qi { j¹to qpf » ku^ari o ctf
dgn n²#

Mqpuvcp^arqn{ gi²u| rncqu^ai c²dtgp xcp gl gp
c|²llgrp0

Gi {gn tg c| qpdep pgo v⁴v²pkn ugo o k0 Gngpdgp
c rgi xcfedd j¹gm ngtkpi gpgn0 ¹{ vrikn gn c|²ul cne0
C h x^atqu rncqu^ai c rgtul g ugo o kv ugo wf ctt>n
j qi { vkqm cvqu. k i cvqw v¹ti {c¹uqm hqn{pcm o²i
c n³kgvng|. gi²u| j quu| À per ku c u| vn²p²u c| klÀ
v⁴3/4m t²u|²t n gi {ct^ap0 f n¹»ri o^at nk ku v|/
v²m xqpc c hgj²t nqdqi »v c [kf k tg0 Ogtv c| klÀ³/
t³4m o qpf l^am ¹2²tgvgv vwg^m j qi { o gi j ci {l^am
t>pl^ap Cdf wn J co kf q0 O knqt c| qpdep. u|>n c j k
vx^add. c o cegf »plckm grkpf wncm c nœunctkpi »u
Àqp. u c [kf k n¹v xq^adc²tv^m uqtv | tqr qi qw t^a/
lwn c hert>n0 Gngp tk j gvgvngp o kpf gl 0 Rwunctqr q/
i^auv c| qpdep xcn>dep rgi gvgw j cncpk²llgrpvg c r^a/
nvc k^ap {^ad>n0 Cdf wn J co kf ô gl v o qpf l^am ô^an
n¹»ri v¹o knk» v⁴3/4m hqpqv ¹2²tv c| klÀ³/
| gv npgm j c d²n²p o gi j ci {l^am c t>pl^ap0 O kpf gl gm
o gu²n0 O²i c o kpf gp Cdf wn J co kf qv nyo rtqo kv²n
cf cvqv j cpi {cu| qti cmo o cn i { lv n²u ddk klÀ³/
t³m nqto^ap { | cv ugo wf qw gttgp²| xg d^ato kn{gp j k
vngupgm n¹vu » cf cvqv hgrj q| pl0 Gngpdgp w>ri nk
f gtÀv j qi { c u| vn²p²llgn u²i {3/4 c|³4o²p {/
qtu^ai dep^a nyo^auq| ». 60 u^ao À j cf vgu²pgm j qi {
c| qppen l³4lpggm Mqpuvcp^arqn{dc. ugi ¹u²i²tg0 C|
3/4o²p {gm h³4f l²p^am» pgi {gf km j cf vuv c| qpdep gi {/
u| gt gp c| v x^aru| qnc. j qi { pgo l³4p0 Gu²g^ai^adep
ukpeu0 C u| vn²p o quv o²i rt>d^an xcrc k< nk v p .
i {qtung| Ai {p³4ngk t²x²p ukngtÀv Cnd^apk^adep gi {
t²i gp rrr cpi ». p²j^ap { per qu nku u| gr cte vuv hqt/
tefcno cv²ngvgn²ddcpvpl0 C| klÀ³/
c| qpdep gu²g^ai^adep ukpeu c| cnd^aplck j¹gntg xku|/
u| chqtf wpl0 C h x^atqu dktvnc o quv o kpf gpp²n hqp/
vucdd0

X²i tg hgrkktcf^a rtkru j wu| qp³4/4 kn0 C per

Ãi { uÃv. o kpv o^aunqt. ul^a | ²u glgt ²xg. glgnp c|
kvgp^arfqwc. i {³p{³4 dqu rqtul k rctvnp. ô ²r/
rgp ãi { . o kpv c| qp c t²ik t²ik jclpcmp. co gn{ gp
KO Cdfwn J co kf. c x³4³u ul wn³p ²dtgf v wcmqf^a/
u^apcmgnu perl^atc0

Xkn³oi {qtucu³ii cn vgtlgt gn f²ngf Mqpuvcpk/
p^arqndcp c ul gpl^aek j³fg< c rcmqc o gicfvc o c/
i^av##

C ul wn³p o gi d³qwck ô ãi { o qpf¹a m ô o gi /
gi {gl vgm c nevpcu^ai xgl gv kxgn< c jcfugtgi o gi /
jci {lc c ul wn³pv c vt»ppp. eucm hgnãi {grgv cñ jgn{gl k
²u ictepe^av x^amcn vt»pl^a2tv. ²ngv²tv0 C| gugo²p{gm
hkn ul gt i {qtucu³ii cn rgtgi pgn0 C| klã³4³m euc/
rcvqm dgxqpwpcm c [kfk kdg. c i^atf^av nghgi {xgt/
| km ²u c| cñ^apqm ul ³klckcm grxqpwpcn0 f n³xi c
ul wn³ppcm uqm ul go ²n³gu h³tfu^ai^adc ngtãv gttg
t^adgu²rpk ngn0 M³vglgt {kfk k hqi qn{ nku|cdfw0
C| wf xct v³4du^a | vci lc. vkn³tqm nco ct^auqm vku| v
xkgn m c dcm kplwukmwlk/k hqi qn{ v³ dqtde x^apfqtqñ/
pcn0 C| gi {ul gt cmem c| qwcm ncn³lqm rcmqc t³4m
gwpvej qm ul cñ^aeuqm n³x^aul qm c T²ik Ugt^aldc ng/
tãpgn0 C p ngv. c j^atgo cmem c| qwkv ku vi {cpkf g
kpvtp^an^an0 Cdfwn J co kf o ci c. p²i { hrgu²i²xgn
hckxcn ²u n³v j u²i gu vkn³t^axcn o gi p²j^ap{ wecv
ul qri^axenc rcmq³dep o ctfv0

Gi {gn tg c| qpdep ugj qugo ngj gv c ul wn³pv o gi /
vñ^arp0 C hqttefcm k eucvqm rqrkknck^ai gpugm x²/
i ki mwc^am c| gi²ul vkn³qu rcmqvcrdk³pwuv ô
tgpf tmw^amn³pv ul cncfpcm gi {km rckkmpd»n c
vkn³qu ³4ul gn³4 hqn{qu»nnp^av c o^aukndc ô c ul wn/
v³p pkpeu ugj qñ0 M³4 dgp dgcmap{qf km ²u cddc jci {/
l^am c ngtgu²u0 C| c j³fg vgtlgt v gn jqi { c ul wn³p vk/
nqu h³4f c³wk hqn{qu»p o gi ul ³4n³40 O^auqm ul gtlpv
o gi ³4ng o ci^av0

C o^aupcr tgi ignj q| c o gi c tglv²n{ p{kl^av0 Mk/
fgtãv jqi { Cdfwn J co kf c| gnu kicm cu »t^anev
²u c| ²lu| cñ^av ku gi { gn³4² v³gw vkn³qu ncdkpgvdgp
v³4n³4vg0

O^aupcr c| qpdep x^atcvcp hqtf wcv n³4gvng| km
dg0 C rqrkknwqm ul go dgj gn{gl n³fgm c nevpcu^ai /

i cn² u nklgrpvkm c u|wn³ppcm ng ngm o qpf cplc. c
j cfugtgi pgm pgo xqrv lqi c. o gi^amer qf^auv n³4pk
o kw³p r g f k i c r cmq c o^at Ā {ku c j cfugtgi ng|²p
xcp. plpeu uqm²tvgrn g. j qi { c xgu|vgw Ā {²tv xc/
renk ku g z r q p^arlc o ci^a∅ K Cdfwn J co kf e u^au^at/
pcm c švpi gtgm²u u^atc| h³4f gm w^apcnō. c| ki c|/
j³k mncrk¹l^apcmuqtuc g| gno gi xcp rgeu²vgkxg0

J^atqo d^avqt n³r xkugn v d³q w o gi c| gi {gn tg
o²i o kpf ki euqpnē. o k p ngkm h³4w f³pv rctnc/
o gpv ô O c j o w f Ughngv h xgl²t hgnĀ {grvg c r w
ô . j qi { c špgo | gv gnj cv³tq|^au^a∅ wf cu^am c eu^a/
u^attcr0 C uglm/Ā/k¹n¹o. cnk r^at pcrren g| gn w o²i
Cdfwn J co kf o gi d³u^ad»n xgl gwg c v³ti {c¹uqnev.
n³4 dgp hg^av cfqw nk c p²rpgm lqi c xcp ngo qp/
f c v k c eu^au^at∅ C j^atqo h³thk v c xcno gt ddgm n³4
| Ān x^anqi cw³m n¹0 O gtv c| c j³ l³4v. j qi { c u|wn³p/
pcm c ngi xcfedd f Āj tqj co ck xcppcm²u hgp {gi gv /
| km j c v³o cf^au²tk u|k³x^a n o kpf gpnk0 C j^ato cu
fgr w³ek» n³v vci¹pcm h n³rr c| gi {kmpgm Ec/
tcuuq ghgpfk n³r xkugn pgm hgn|gi {²ugkd n o gi gi {
cmuqtkdep v³4³m u|qri^arvdcp^am». o ci cutcpi Ā
hceke eugpf tvk|v³»pcm j kgrgu cf c v k d»n r q p v /
ucp wf lwnj qi { hqn|vrg c| wqn» ft^ao ckv^am q|^au0

F²nw³p j^atqo »tc hgn² tng|vgm o gi c n³r/
xkugn mc [kf k dg0 C| gn u|qd^adep c u|wn³p wqn» j
vkn¹tc. Crk F|ugxcf dgl hqi cf lc ngv qn|cp u|gtvt/
v³uqcp j x³4 gn|²ngp {u²i i gn cj qi {cp c ngi pc/
i {qdd Ā vkn¹a j q| knkm co knqt c r w x c n»m lgrgp v
ng|pgm nkj cmi cv³utc0 H³4lgi {|k c pgxngv »u dgnq/
r qi vcvhgn²i gu i c| f^al^aj q|0

J cto kpe o²i o gi o c t c f v hngvg u|qri c n³l²tyg
c n³r xkugn ngv c u|wn³p o ci^aprcnqu| v³n^aj q|0 O g/
ngi vxcu|k per xqn0 C n³r xkugn n³4p x²nup|. fg Āp/
pgr²n¹eugp u³4²vtwj c xcp0

O knqt nk³4v o^at l»xcn ngx²ud² u|gtvtv³uqu0
C j qo nqn¹t»n i {³pi {³4 km c xgt³l²n0 C| |cn l³4 nk
j qi { c u|wn³p pgo hqi cf ugnk0 P ci {qp hgn xcp kp/
f w x c hgn²i g ô o qpf lc ô²ngxgu|²n¹gu c dgo g/
pg0 C m³4w²i xgl gv lg. Guu|cf r euc. fcrk³u. j³l/
pgxgu v³dqtpqm gttg nklgrpvk j qi { m r g f k i o²i ku

dgo gppgn0 C vknit »xc kpk ngv< c ul wnp r qo r^a /
 ucp e² rj | < v³ / dd tgxqkgt ku xcp p^a r0 ô C | wqn»
 per qndcp c eu^a ul^a t o q | f wrcwcpwn »t^a nj quul cv Ñn
 f^a p^a p^a. eucm p² j c o qeep o gi . j qi { x² i ki uko ¶ /
 uqp cte^a p0 Co kvc c ngu^a v j ¶ v o gi ner vc . j qi {
 o gi eucn^a nk rg ngm o qpf cpk . o gtv c j cfugtgi pgo
 vctvc v. euqf^a rvcu f qm i l^a ul »f qw rg xgrg0 C | c
 m^a / p³ / u rnk hqn { co cv . co gn { cpp { ku qt glvk xct^a /
 | t^a dc c | wqn» . o gi pgo x^a nq | vj cv » r gtegnlgp . c
 xgu² n { pgm nk gw go dgt rgn^a v0 Cdf wn J co kf c
 j cwcpj cv² xgu l² tk o q | f wrcwcp wcpul dc vj gvgvpp
 p^a xg . o gi dcdq^a | xc . gi { ul gt gp ugo o kv ugo xqr
 j clrcpf » c | wqn» per qndcp eugrgnf pk0 O kv c | ^a n /
 o^a dcp hwpc cnet » . fg xcrc k xct^a | urv o kv pgo
 wf » go dgtv . h² / f³ / v^a k o gi dkrpeugn² i ul^a mvc
 o gi c | wqn» r krcpcvcp . o kf p n^a vc . j qi { o kpf gp
 grgul gw0 C | wqn» Ñn n^a tv^a l^a v . c [kf k v ku nkcf vc
 c ngl² d rcdgeucr v^a m0 o kvx^a tj cv0² i A00

G | c vci knw xct^a | u ngl f hrgpi gfpk ô c vk /
 nit »xc kpk gddgp c xgu l f gm gu r krcpcvcp c m^a /
 f³ / u² i g0 G | gm c | qdcp eugr gv ugo l² rpgm ô x² i /
 ul Ñn² i gug² p p^a nm ku xcp hgi { xgt0 C vknit c | cl /
 nit dc j cter ô gl v ku o gi ngnw² t plg0 Fg pgo ul » n
 ugo o kv Ucl^a w^a i qu o » f qp p² | c j^a tqo gnu^a pv go /
 dgtt0 O gi t^a pvc x^a n^a v² u dgg | gvk ngv c ul² rgu .
 j quul Ñ hqn { qu » tc0 Kppgp o^a t gi { gpgvcp c ul wnp p
 dgu ul qd^a k j q | xku c | A0

C eu^a ul^a tk ul qdc clvc gr² o gi² tng | xg . gi² ul
 pgi { gf » t^a ki ngm x^a tpk0 Xcrc k³ / u³ / p³ / u^a vku vgrv
 ngl f gl crcw rcwcp grj cvm cuqf pk c m^a / f³ / u² i gp . c .
 dwnq w eu^a ul^a t ul go² n^a g k^a pv . P² o^a p^a a mpcm c0 m^a /
 f³ / u² i vci lck c | cl » gn w0 C x^a tcnul^a u r g f ki p { wi /
 wrcp ¶ » xcrc k0

X² i tg nlp { ¶ kn0 C vknit l³ / p nit0

ô hgn² i g n² tgvk c | wcnv ô lgrgpvk c u^a rcfv
 hcvrgo dgt0

C eu^a ul^a t qw^a m c ul qdc n² / gr² p . v² vx^a | » o q | /
 f wrcv šul Apvrgp kpicf q | ^a u o gpgm^a r² u² v^a o cf^a u
 n² / v0 Rgeu² vgu . i { t³ / v . hngvg ekktwj c xcp tckc0
 Hg | g o² n^a gp . hgt² p c ul go² dg p { qo xc0 U cni^a n^a v

o^at pcrqm »v pgo i qpf q| v. l²u²Ang= tgpfg| gvvgp.
m²equ. dqi n{ cu j cleuqo »0 O quv r² u| km eucm o kn{ gp
¾gi g| c| go dgt0

C u| w²p²pv. o k²vj c xkmco qu^a tco l^atp^a a v. o k/
nqt c j^atqo go dgt ¾u| ¾pu| gt gp ngtgu| vdghqpv
metten o²n{ gp o gi j clqk. dg²r0 K²i cvqwp r²r
h²r²l²Ån0 J cpi lc. o k²vj c pgo ku c| ¾k² rppp0 U| ci /
i cvqwp n²tfk

ô O kvcmctpcmA

Gu| cfqv cnetvc gmpp²tg ku j cvm^adc ngt²kk
c| c ödcdq^au vku| vgrv. co gn{ gv gmpp²i gk ku²tg| pgm
j c u| go dgt Åpgm c u| w²p²ppcr0 Tgo gi c j cpi lc.
co knqt dgrhqi cpp{ku| qt^a vi qpf qv o qpf cpk/
xcn²l^adc<

ô C uglm²Ån²k²r²o n²cf v h²w^al^av0 G| ški gp/
pgn² x^arcu| qn ettc c n²tf²utg. u| cdcf/g lgrp n²¾Ån/
o²p{ gm n²¾ v c p²r n²r xkugn kpgm c r cf kucj qv ngo qp/
fcv²k0 C rt²h²v c| v o qpf lc< ŠJ c c r cf kucj o gi /
v²u| k n²¾gru²i²v. gpi gf gm gu²i i gn v²vq| wpm pgn²0
J c pgo . r²vgj gv²Ånc v²pt²»r²0

J co k² gi { fctcdk² j cmi cv0 O ci c gr² p²|. o clf
eugpf gup^arcu| qn<

ô P go v²gv²gm ugo o k²r²0 | p o k²pf ki eu²m
l²vcmctvco 00

M²pp{ gm i { rpgm c| vcmqf » u| go²dg0 —i { u| »n/
x^ap eucm o quv kuo gtvg o gi²u o quv u| gtvgw o gi²/
r²v. ¶i { xku| qpq| |^amc u| gtvgv²vA

ô O kv vgi { gmA ô hqn{ vvc. o k²vgi { ¾po ci^a/
pcn0 O clf j k²vgrp h²merlc c h²l²v< ô Gum²Åf lgp²gm
o gi p²ngo . j gi { ki c| cv dgu²r²gm²u j qi { r²gi c²dd
c|²r²vggo gv c euc²r²f qo cv n²po²rk²# Gum²Åf lgp²gm o gi .
j qi { g| vc| ~i²tg²v²Angvc l²¾k dgp ugo u| gi km o gi #

Gu| cf r²ec j cpi lc o quv o^at l²¾p{ gup^a eugpi 0
P go l²n o^at c P ci { Åt²»r²0 K²n²dd ucl^arlc0 Qn{ cp
n²po²r²vgu cnet rppk co kn{ gp eucm²gj g0

ô P { vi qf l²m o gi . Hgn²i 0 C pgo | gv { r²u x^an/
rnc c i ctepe^av0 Hgn²i gf gddgp qn{ cp dk²qu r²gv.
o k²v c ucl^av u| cx^adcp0 P go h²ilwm n²to^ap{ | cwp/
n²v dgeuvgrpu²i i gnng| fgp0

ô | u o kvcmctpcmxgrgo A

ô Hgn²i gf uqtuc hrgwgc pgo | gvi { r²uf³p⁰

C ul wv³p vgn¹pvgv Àtc gr²xgf gl kn⁰

ô **00** O gi p{gtvgo c i³/₄³/₄ j^adqtÀ**00** c v³/₄/
v²pgrgo hqi lc o clf o gi o wcvpk o gpp{kv vgwgo
c| qtu^ai²t⁰⁰Dqu^l ÀvcnetpcmA

ô C| cmqvo^ap{ rgjgvv²gpp² vgu^lk j qi { d^at/
nk^vku ki c| u^ai vcrpu^ai²tlgp**00**

ô | u j qx^a cnetpcmxkppkA

ô Hgn²i gf vctv| nqf^auk j gn²t n o clf c pgo /
| gvi { r²u j cv²tq| ul kp^vp⁰ Kio²vgo . Hgn²i gf gv ugo /
o k ki c| u^ai vcrpu^ai pgo hqi lc²tpk⁰ Eucnku v³/₄²ngvu.
vng^lgu xk^lui^arcv rghqn^lcv²uc gug^vdgp rpppg j gn^l(g
d^ato kn^lgp lqi ul gt nqp| gn^xgpek r^xqp^au^apcn⁰ Gttg
c| qpdc^p dk^lqv^lqo Hgn²i gf gv j gi { ugpnk ugo
i qpf q^l M²tgo . pg pgi gl^lug o gi c fqi w²ncv. Eu^a/
u^atk Hgn²i⁰ Xcrco gpp{k²pm²tf gn²dgp eugr²gm^lkn
co knqt**00**

Gul cf n²t j cpi l^av j kv²grp cl^veur nqf^au
ul cm^llc l²rdg⁰ Pgo v³/₄²v²pkm ugo o k r²p{gi gu. eum
gi { eul²qu nk^lk^lÀ ul crcf dg c ul qd^adc⁰ C eu^au^at rgi /
nk^lgdd h²c⁰ Qfcul crcf c| cr l^aj q|²u^av³/₄grk⁰ C| ku
v⁰ C| crc o gi ul o qi c^vc c i { gto gm j cl^av⁰ H²met l^a/
xcn^av³/₄gr^xg vct^vc⁰ C h²k^lÈunc j cpi qucp gn^lqnqi lc
o ci^av⁰ C fgr w²ek^v vi lcl²pcm ul go²dgp ku n³/₄pp{ À⁰
C i { gto gngvo kpf gp v³/₄³/₄ml⁰ a flc⁰

ô Gum²l²gpgm o gi . j qi { gl²gn²gm pgo gukm
d^ap^vf^auwn#ô c ul wv³p j cpi lc tgn²v²u l²v^l q^lqu⁰

C j^atqo À gun² j gn^lgw gm³/₄u^l 3/p⁰ O gi d^l a uwm
x²i gv²t⁰ m pgo c ul wv³p cr^vwcn^vk ô pgn²km c
pgo | gvr ctcpeuq^l

C pgo | gvi { r²u r gf ki pgo xqrv ul gpvko gp^vru⁰
K0 Cdfwn J co kf . c x³/₄³/₄u ul wv³p . pgo o ctf²j cv
U^lco dwdcp⁰ U^lcm²pk^lkdg . c| hqt²cf cm k hngi /
x^atwndc xk²gvkn⁰ C p²r^ltkdwpqm gh³/₄²/₄ l^v»k²ki xk²||
v²n⁰ X²i tg o gi gi { gl²vgn⁰ Kio²v j^ato cu dk^lqwa^ai qv
^an^lq^lwcm³/₄u^l g⁰ Fg o quv o^at pgo wf^xctv^atv. t²ik
n²r^lxkugn ngv j cpgo p^atqo p{gtudg^l 2f n^vqp^av
n²rf gpgn⁰ J wul pk r cuc v³dqtpqnqv. I j crkd gl²tgf guv

²u Crik Hgy k dgl tpci {qv lgr³km nk c u^Àn(qu hgrfcv
vgrlgv²u²tg0

J wu| pkr cuc g| v o qpf lc c v³4v²pvgrt k<

ô Mkrpe »tcnqt guvg kpf wvwpm c [Æk dg0 C
u| wv³ppcn ngmgw n³4³pk grj cv³tq|^auwpncv< U| crq/
pkridg m^Àrf l^Àn0 C| gn u| qd^adcp c vkm³tten F| ugxcf
dglgn vcn³m³| wpn0 Hgm³tvgo < xgl guugp c u| wv³p
gr²0F| ugxcf ¶| { x^arcu| qn<

ô C u| wv³p l>n e²rq| 0 O²i uqj c pgo v²xgu| /
vgwg gn c e²rr qvqv0 M³o²rl²m c| ²p²rgvgo gv²u c|
³p³4n³v ku0 Ogtv. j c o gi o ctcfcpcm co gmgw. j qi { dg
cnetpcm o gppk grkgu| vgo 0 Euqf^arcvucp dk³vqu
ng| g xcp0

ô i { x^arcu| qnco ô ¶| lc vx^add c hqtctfcm k
i gpgt^ark<

ô C hglg. F| ugxcf dgl. c| gp{²o 0 Cn³t gddgp
c rgtedgp ku o gi ³4gyj gvgo 0 O gplgp²u vgi {g. co kv
rctepuqnc0 0 O qpf lc o gi Cdf wn J co kfpcm j qi {
dgu|²rgo ngm xgrg0 T>rc²u c| ²rgv²t n xcp u| ».
pgo o^aut>rf0

I j crkd dgl²u Hgy k dgl c| clv» gr² a mcn0 Gp
o ci co dgr²r vgo. c u| wv³p hgr² n³4 grgf vgo²u pci {
vku| vgrvgnn³4u| ³4v³4vgo 0

ô Tgo²rgo. Hgn²i. o²n³p{qpk hqi kc o gi d¶|
| cv³uqo pgj²| xqn³v0 C pgo| gv²u c j cfugtgi rc/
tceup³tc l³4vgo kfg. j qi { Hgn²i gffgn c| ²rgv²t n
dgu|²rgn0 Hgn²i gf²rgv c p²rpgm²u c f kpcu| v³pcm
gi { hqto^ap hqvqu0 C p²r pgo n³x^aplc. j qi { Hgn²/
i gffgn u| go dgp gt u| cnqv i { cnqtqrlwpn0 Ugo o kv n
ugo ngm l³rpkg0 Dk³vqu³qo gtt n J c »j clvlc. n³u|
xci {qm gttg o gi ku gum^Àpl0 Hgn²i gf²rgv²v i ctcv³n³
lwn0 Ugo o k ugo hqi v³4v²ppk Hgn²i gffgr0 Kio gtk
gn f gk v³4v²pgv²v0 Hkx²t²pgm O w^afpcm u| qo qtÀ uqtuc
dk³qpx^atc go r³ng| gv²dgp xcp o²i Hgn²i gf pgn0 U| q/
o qtÀ²u vcpw³i qu v³4v²pgv pgo eum c n³v wtcmqf ».
j cpgo c| q| o^ap p²r u|^ao^atc ku0

ô Ok uqj c v³4d² pgo »j clwpm j cuqpn» gugo²/
p{gngv0 C p²r ugo cnet kn{guo kv v³4d²0 Fg c pgo /
| gv³ { r³u j cv³tq| cvc xku| cxqpj cvvcp0 M³v u| wv³p.

c| À. o gi c t²i k pgo ²nj gv gi { x^atqudcp0 G| Hgn²/
i gf ²u c pgo | gv²tf gng gi { ct^apv0

ô C u| w^ap u| qo qt Àpcm ²u d^avtvcrppcm
n¹u| qv0T³k kf gp x^aru| qn0

ô O gi ²t vgo .. p⁰O kv»j clv vj^a vA

ô U cm¹pk¹kdg cnetlwmxlppk Hgn²i #

Cdf vnJ co kf xku| cf³ddgp0

ô Okv o qpfA O²tv o gplgm U cm¹pk¹kdgA Gp
o^at ³4gi go dgt xci {qn0 Dgvgi xci {qn0 P cr lckv cv
c Eukci^a pdep cnetqo dghglg| pk cj qn u| Àngvgo .
cj qn O w^af ku o gi jcn0 Qw xcp c| ²p j gn¹go 0 Xci {
rgf ki jci {l^am o gi u| cdcf u^ai qo cv ²u gpi gf lgp gm
d²n¹p Gw»r^adc o gppk0

O gi j clqnc0 . cp²m¹n j qi { x^aru| qnc0 xqpc0
M¹| o q| f w^awcn lgrg| vgo eucm j qi { c pgo | gi { r¹u
rctcpeuc gmgp ngj gvgv¹gp eugrgngf pk0

Cdf vnJ co kf ô kf u o^at ²u t²i gp u| ¶kdvgi ô
^alwncp jcp{cvqw j^avc0 Hgru²i gk tqj cpvc m j q| |^a.
xk¹gv ³4p³4vgm cte^atc. n¹4 dgp j cpi qucp uk^apn¹u| vcm
uqtuw¹h³4¹4v0

Co knqt Cdf vnJ co kf o ci^aj q| v²tv. hck ²u r¹/
p{ck wpu| qn¹u^atc x²i tg ku dgrggi {g| gw. j qi { c¹n¹/
xguug o ci^avc pgo | gvcnetcv¹pcn0

kp²| ngf vgo . j qi { hqi l^amdg c n¹q¹ek¹vc00

C u| w^ap o^aupcr f²ndgp kpfwv gn c r^an{cwf/
xctt»n0 G| gtp{k t²i k j ¶k d n o kpf³4u| g n¹v hck. j^a/
tqo u| w^apc. p²i { hgru²i g. ³4w ³4gi u| qn^an¹cu| /
| qp{ ²u nk¹pe n¹qo qtp{kn n¹u²tv0 C| Àxqpcn ²u c
r^an{cwf xct vgrg xcp n¹vq^axcr0 O kpf gp^aw c| kh¹À
v³4³4n¹m eucrcvck cm¹vpc m ut uqthcrv0 C n¹u²tg v
eucm c ngi u| Àm²i gugdd euqo ci qv xkj gk o ci^axcr0
C p m ²u i {gto gngm c| qpdep pgo u¹pcm¹ dk q/
p^atc tgwgi gw ²u ko^afqw w^awm v¹qvc o gi pgnkn0
Cdf vnJ co kf j q| |^avtvq| »kv pg uclp^ani cuuc c v³4o gi #
o ci c ku d^astcp. p{wi qf vcp xlugmgf kn0 Xku| c/
wcu¹lc. o knqt hgn cnetv¹m ugi ¶gpk c o qf go . o c/
i cur¹reu u xcu^ak n¹q¹ek rgttqpl^atc0 Gi {gp¹gugp. o g/

tgx²p vctlc o ci^av u^{3/4}v²m gi {gptwj^al^adcp. co g/
n{gvpgo xqmv clrcpf} » r^xg^vpl⁰J ci {v^an⁰

C tci {qi » Āl. xkncp{xk¹i i¹u¹ u¹ crjpn¹euk o²i
gi { kf¹gi qw^am c r^an{cwf¹xctqp⁰ X^atpk n¹gm xc¹ro k
xqpcv¹gn²u n¹ukn⁰ C u¹wn^ap gn¹pkm c n¹ggt¹gul¹vgw
h¹Āi i^{3/4}p{ o^{3/4}3⁴m⁰ C u^{3/4}v². j¹qo^an{qu. »tk^auk Āxgi/
euctpqm xku¹j¹cpi¹qu n¹to^alc pci {x^atq¹lcucp j¹c¹v
R¹g¹ki wcu¹pk¹eu⁰ U¹gn¹kv ugo gpi¹gf¹pgm dg c m¹Ā^{3/4}p/
xqpcv¹kp¹f w¹u¹q¹j¹o

C n¹Ā²tv¹g¹ku eug¹pf¹dgp. r¹qpv h¹Ā²ij^atqo¹n¹qt. ²ngu
h¹Āw{ j¹c¹u¹v¹ d¹gn⁰ C| t¹v^am¹ n¹cv¹q^am v¹ku¹v¹gn²ut¹g
go g¹rk¹m r¹w¹n¹l¹w¹n¹e⁰ C u¹gt¹gn²p{ r¹cu¹cp n¹ki^{3/4}f¹Ā⁰
C n¹Ā^{3/4}p²i n¹kp¹pt¹gn¹f¹v c r^an{cwf¹xct gn¹w⁰ P¹go ku
w¹lc o gi. o kn¹qt k¹pf¹w¹v c xqpcv⁰ | u gi { r¹gte o¹Ā¹kc
o^at c r^an{cwf¹xct p¹cr¹x¹k¹i¹qu l¹m¹Ā²dgp. gi {tg
i {qt¹ucdd¹ep t¹q¹cp» h¹gn¹vg e¹u¹m l¹gn¹k j¹qi { ^{3/4}3⁴m¹g
gn¹ci {v¹ h^ax^atq^av c| w¹cm¹q¹f}»⁰ C d¹qu¹r¹qt¹w¹/
r¹ct¹vk o gu²u h^ax^atqu¹v co gn¹p¹gm= j¹c¹w¹cp²v ²x²d n
j¹cto k¹p¹eng¹w p^av¹w¹c xq¹n⁰

(00) X²n¹q¹p{. u¹Ā¹ng e¹u¹m Ā¹u¹km qw n¹kp¹c euct/
pqm gn¹wk u¹cdf¹ v²tu²i dgp c r^xgi dgp⁰ C xqpcv¹
t²i gp gn¹pv. gm¹ep{ct¹q¹f¹q¹w⁰ C| v¹p. r¹cu¹cp. c h¹Ā¹v ku
gn¹^am⁰

C X^{3/4}3⁴u U¹wn^ap pk¹eu v^{3/4}dd²0 Gn¹pv. gn¹w¹q¹w
c v^{3/4}v²pg¹go u¹Ā¹m{gu¹v l²dgp⁰ O w¹u¹v¹ch¹ M¹go^an c|
kuo gt¹gv¹gp xg¹l²t¹netk cn¹tpci { o gi p{wi¹q¹f¹j¹c¹v< C
u¹qtu n¹Ā^{3/4}p^{3/4}u k»pk¹l^ad»n c d¹w¹q¹w u¹wn^apv q¹f¹c/
xku¹km c¹j¹q¹pp¹ep gi {n¹qt c| kuo gt¹gv¹gp xg¹l²t¹netk v¹ku¹v
gn¹kp¹f¹w¹< U¹cr¹pk¹kd¹g⁰ C| C¹n¹v¹pk¹x¹kc. c¹j¹q¹x^a c u¹w¹/
v¹pv h¹qi¹qn¹n¹pv. ²n¹j¹cr¹wn¹pv. d¹gn^at²v¹n{q¹|^am pk¹eu
o gu¹g c w¹n c n¹gun¹gp{ n¹ku h¹c¹j^a| w¹n c¹j¹qn gi {n¹qt
O w¹u¹v¹ch¹ M¹go^an v^{3/4}n^{3/4}v¹g i {g¹to gm¹qt^av⁰ Euc¹n¹qi {
c u¹gt¹gr¹gm n¹ku² h¹gn¹ug²n f¹v^{3/4}n¹c u¹wn^ap. c| qt¹u^ai
w¹c. o qu¹v c h¹qi¹qn¹ ²u c| gi {n¹qt¹kc¹dc. M¹go^an c
c h¹gn¹u¹cdf¹w¹ gn¹3⁴g¹pf pci { ²gn¹v gn¹w^am» go dgt⁰
M¹gn¹g gpp²n pci {q¹dd gn¹i v¹gn gi { h¹kc¹cn h¹tk¹Ā¹
u¹^ao^atc^a

M¹go^an cn¹tpci { v¹cr¹p d¹qr¹f¹qi o qu¹v g¹gn¹dg¹p c|

»t^a młcp0 C pci { jcte grf n̄v ô² u Mgo^a n pgo wf v.
 jqi { c jcte i { gto gng o kpf ki eum c jcte0 Crki.
 jqi { šgngō gwgō² rēwg gnu pci { gngphgr² v ô^a tku
 qw ugwpngf km p{ qo^a dcp c| Āqppcp u| Ārgvgw
 o^a uqf km pci { gngph² rē Gpxgt dgl. c pcr j ug. c Dgt/
 rkp d n ugd^v dgp j c| cv² tv. klĀ f km^v qtlgr² w. cnk i { /
 r² k Mgo^a n̄v² u cnk t³ klf gugg dgrguqf qtlc o clf j c|^a /
 l^a v c p² o gvgm qrf cñ p gi { tgwpgvgu u| gpxgf² ugnvg
 j q| » xkñ i j^a dqt Ādc0

Gi { xkñ i j^a dqt Ādc. co gn{ dgp c v³ v² pgm k V³ /
 t³ nqt u^a i o kpf gpv grxgu| vj gv. fg ugo o kv ugo p{ gt/
 j gv0

O wu| vhc Mgo^a n o kpf x² i ki gngp| k g| v c j kv /
 rēp p² o gvdct^a w^a i qv² u m² f gngpg. c| gnu rgtev n
 hqi xc c| wqn» ki 0 C uqtu r g f ki Āi { tgp f gng. jqi {
 gi { nqt Mgo^a n cn tpci { hqi lc o clf u| go² n{ gugg o gi /
 wf pk K0 Xkñ qu eu^a u^a t w n jqi { c xkñ i j^a dqt Ā o gi /
 p{ gt² u² tg pkpēu ugo o k tgo² p{² u jqi { o kpf gp qf c /
 xgu| gw0

Gpxgt gr qej^a l^a v. c p² o gv u|³ k gw² i nqt u| cñ v.
 O wu| vhc Mgo^a n o² i ugo^a v m| j cvlc o gi 0 Ogtv
 gw n hĀi i³ w O wu| vhc Mgo^a n gi² u| l³ k gpf pci { /
 ū^a i c0 C| c| Ā. co gn{ x² i Ān ku c o qf gtp V³ /³ nqt /
 u^a i j q| xg| gvgw0

KOT: U 0
GPXGT: UC P: OGVU " XGVU I 0

Zofnco c/ ^anco dcp0

C h^ñi i 3/4p{ vj^av rgi 3/4f Ñ. c| gnu hgrkqp^aupcm
x²i g0 | u o quv ngl fg^vv xgu| k n^ñv hcvn xgl²tnetk
vku| v r^atj ctec. cnkm o kpfngwgp c| v j kw²m o ci vni/
t»n< j c| ^alwm rqrkkn^ñl^av. ul qek^a rku j crf^a u^av m xcppcm
gi {gf Ñ j kxcxc k^ap{ ¶cpk0 C| gi {km Gpxgt dgl. c p²/
o gvm j ¶xg0 Qtu^ai^av ul kpv² ul tgx²vgp Ñ xkwg c
p²o gv ul 3/4xgu²i dg0 V3/43/4qtu^ai j cf dcr²ug c xk^ñi /
j^adqt Ædcp c| muto^ap{^apcm pgx²j gl h | fkn0 O²n
»cp gi {gpn gtgl²u n^ñr gu²i xgv²n{v^atu.00 rgu|
pgo uqn^ñtc O wu| vhc Mgo^an c| cmqt o²i nku. lg/
rgp^vmrgp tpci {0 C r^atj cte ft^aock²u u²tgl <
qtu^ai^apcm ul qn^aipk cnet». n^ñv o gt dgp n^ñpd^{3/4}
²rgvhrqi^au Æ l^ñthk²rgv/j cñ^ñtc ul »n» m^ñf gm g0
O gi ner ». cj qi { F^axk² u I »r^ñv o quv j ctedckpf w/
pcm gi {o^au gngp< Mgo^an c| kuo gtvgp xgl²tnetk
tpci { ô²u Gpxgt. c ul w^ñp tqm^ñpc. c hqttefcñ^o
crlc. c jcvñ^o o kpf gpgug. c eu^aul^atk o kpu| vt.
j cf ¶ugtgi rctepuqm vñ^ñp ô ¶i { i qpf qic ô c|
gm^{3/4}xgng| eu^aul^atkf kpcu| v^apcmu o gi cñr ¶»lc00
00 J cwo kñk». o kpf gp pgo | gvdgrk go dgtpgm ngl/
rgw o gi j cplc. j qi { c xk^ñi r^at²x o Æxc grf^{3/4}pvug<
n^ñpgm xcp r^ñvqi quwm^ai c xgl gvpk Gw»rc ngrvk
eu Æun^ñdgp<ô F^axk²pcñ/g. xci { I »r^ñvpcñA

O wu| vhc Mgo^an xgl²tnetk tpci { ô k^ñ n^ñ4 dgp
o^auqf tpci {d»n gnu qu| v^an{ Æ tpci i {^a n^ñrgw gn ô
o²i pgo uqnev p{gtv c hqttefcñ^o o cñ0 C hqttefc/
ñ^o ulmgtgn l^atv. c Pci { Gngph^ñn gn^axq| qw. ô fg
O wu| vhc Mgo^an o²i ku c| qp xgwg o ci^av²ul tg.
j qi { c| go dgt pgo uqnev p{gt c| |cn ugo. j c rgi /
o gt²ul gdd^am ck dgx^aipcn0 C tgo²p/. c ul ¶pgu gn /
3/43/4 o kpf ki uqmenki c| kdd 3/43/4. o kpv c xcn^ai o

① C dwnq w u| wⁿ p i ctpk^Alc j gn{ gw. o quv
 c| kl^À3/4³m šnqo k²õ r^rgw c| cdf wj co kf kuc jc/
 vco cuqm j gn²tg0 C ..nqo k²õ f kxcvqu u| » gmqt k/
 dep c Dcm¹pqp= O wu| vhc Mgo^an ku o gi vcpwnc.
 j qi { c šnqo k²õ go dgtgk c šnqo kv cf| ukñ. šnqo k/
 v¹eukñ. c rgi pci {qdd j cvco cv lgrgvj gvk m xg| gv km
 u|^ao^atc c Dcm¹p uqnu| qt n³/4 tgpfo gpvqu gt u| cm¹
³/ux²p{ glp0

Gpxgt. F| ugo^an²u Vcrccv. c| kl^À3/4³m nqo k²
 j^atqo xg|²tcrcmc pgo tqm¹pu| gpxg| O wu| vhc
 Mgo^anrcr0 M³/4³ ã³ ã³ eucm F| ugo^an ngf xgrk c |^atm/
 |qw. o gtgxvgn¹pvv. euqpvqu. hcvn tpci {qv0

Mgo^an gm¹r| gr²ugk x^ai {ck pgo x^ancm dg c
 pci { hqttefc¹mo i { | gr²xgrk g| hcvmt^apcm v¹p
 gi { km rgi pci {qdd eucⁿf^auc0 C|^anco hqtfc¹wcv dgn³/4
 xgvng| gw< c x³/4³u u| wⁿ p o gi dwnq w. Mgo^an u| cdcf
 go dgt ô o²i ugo j clrcpf»m c| Ì go dgtgm t>rc m³/4
 p³/ugdd wfqo^auv xgppk0 C hqttefc¹mo ukngt³ ã³< fg c
 hqttefc¹mo^atqm vgi {u| gt gp nk¹hrglvw²n0

C| tpci { vj^av gn u|³/4 ku xku| co gi { U| cm¹pk/
 nkdg0 Qw xcp o²i o kpf ki c i { | vgu kl^À3/4³n³/4m u| gr/
 rgo k xg|²tnetc0 C hqttefc¹mo pci {lck c h x^atqudep
 pgo j clrcpf»m o²i Mgo^an¹dep c špci { go dgtvõ o gi/
 r¹vpk0

Mgo^an t²u| vgu| U| cm¹pk¹ndgp vx^addtc ku c vk/
 nqu i { r¹ugngp0 Fg ô²rr Ì { . o kpv c n²u ddk jcf/
 l¹tcvndcp. hqttefc¹mo cndcp< gi { gn tg o kpf ki²u
 o kpf gp³ ã³ c j^av²tdgp o ctefc< qm¹ucp. j qi { hgrv /
 p²uv²u kki {u²i gv pg ngnugp0 Mgo^an m³/4³pdgp nq/
 o qn{cdd. o kpv xcrcj c0 Tkn¹p o quqn{qi. j cmi cvci 0
 D^at gddgp c| kf dgp o²i eucm šgi { c uqm n³/4 ã³<
 dclv¹tuck vku| vgrkm²u nku² h²mpgm ku v rg0 | t| km c
 o²n{u²i gngv. co gn{gngv O wu| vhc Mgo^an j cmi cv¹uc
 tglv¹gi gv ô pko dwu| v r¹vpcm n³/4 ã³v¹vg. co gn{pgm
 o gi vgtgo v²u²dgp c hcvn vku| v xlugm¹gf²u²pgm ku e²/r¹
 wf cvqu t²u| g xcp0

Pgo wf pk v²h¹ucp. xci { nqo qn{cp i qpf qrc/g
 O wu| vhc Mgo^an c| v c hrgi { |²u²v. co gn{gv g| gnt n
 c| kf ml nr cr¹tc xgvw0

G| v¹lc<

ô Mqpuvcp^arqn(tc xqpwi^auwpm w^ap v^{3/4}v²pv.
 co knqt Àtc U|cncpkndg²tvgo xku|c0 Gi {km guvg c
 Mtkv^an/rcm^adc v²tv^apm dg0 C |u^aÀqnv pci {vgtgo/
 d n gi { r^areu p^av. eli ctgwch^au^awgn²u vku|vgmgn v^ark
 nkugdd jgn{k^ai dg o gpv^apn0 C vku|vgm t^ank^av »u u^{3/4}v
 kwcm²u špci {qp j c|chku^apō dgu|²ni gwgn0 Ctt»n
 xqnv n^{3/4}v^am u| ». j qi { c hqtcfcm knj q| pci { go dg/
 tgn²g xcp u| ^am²i 0 Ok{gp ku w^al f qpn^ar r gp c pci {
 go dgtA

ô Gi {kmlgrgprgx hgm^ankq<

šQn{cp u| gtgp²mrgppk o kpvF| ugo^a r#0

ô C v^{3/4}ldk^amj gn{gugngn0

ô šDtex>ō0

ô C| cu|vcp^an ^an m c|w^ap o kpf hgr^ao hqt/
 f w^acn0 Eucm h^aw^arci kuo gtvgo ngv0 / p p{wi qf v.
^anj c^av^aqu rkn^acp^au^acn p²/vgo t^alwn0 | u o kn^{3/4}dgp
 ¶/ p²|vgo ngv vgo²u|gvugp xcr^ao kv wf wmt c
 cmt^awo cfp0 Fg. À { r^av|qw< ugpnk ugo²tk p²o c
 o q| f w^av^acp^ai qo lgrgpv u²i²v00

Fg Mgo^an c|v ku ng^alc. o kpv o qpfqw ki gp ng/
 o²p{ ki c|u^ai qn^av o ci^apcm F| ugo^arpm u| go²dg
 ku0Grdgu|²r^au²v^ai { hglg|vg dg<

ô 00 F| ugo^an p²o^ap j cmi c^aw c0 u| cxcko c^av<
 c|v^ap. À { r^av|km mtkn^ao dgp{qo^auc gn ku v^{3/4}n/
 f^{3/4}v00

O wu|vchc Mgo^an uqntc vctvqwc o ci^av gddgp c|
 kf dgp0

Xguu^apm gi { rkn^acp^auv o quv o^at n^{3/4}grddt n
 ettc c| go dgttg. cnk c j^aw²tdgp gmqt o^at c pci {
 u|gtgrtg n^{3/4}u| À0

Mgo^an²t|k j qi { m^ar^agv²ug xcp²u cnetlc. j qi {
 u|gtgrjg| l^auuq⁰ Fg j qi {cp²u o kn{gp u|gtgrjg| A
 G| o²i n^{3/4}v²i gu c h^avcn tpci { gn w0 C l^{3/4}k o²i
 c| kf m o²j²dgp cu|km²u pgo ngjgv wf pk o kv j q|/
 pcmc| gm^{3/4}kgvng|²xv^agf gn0

Eucm gi { n^{3/4}v²i vgrp0 Mgo^an²t/k j qi { dgppg
 xcr^ao k tgpfn^ak^ark r^anu|km²u gl c šxcr^ao k o²i ò gi {/
 u|gt. j cvcm cu. f kcfcm cu hqto^amlcp nk hqi v^{3/4}pk

dgn ng0 | u c| ku dk vqu. jqi { pgo c hgpp^am» tgp/ x²fgr²dgp. jc/pgo hqtcfcm k Àxp hqi Mgo^an xg/ | gv ul gtrj gl lwpkOG| vku l»nwflc. gl vku l»n²t| k0

O wul vhc Mgo^an gmn²tkdcp jcto kpecfkm²x²pgm hqtfwn»l^ajql n³/4grgf gw0 R^at j»pcr x^arcul vc o^at gn v ng0 C hxcn ncvpckunq^aud»n njo qn|. hrgn u²i/ vnglu h²thk ngw0 C dgl^atv qtu^ai t²ul gm n²v²uc. ô jku cpp{hgr² xkw²m o^at ul qn^arcv² u šngx²ud²ô ul qn^arcv Àlck ô cpp{h²rg go dgttgn xcn»²tkpvn/ |²ug. vrcul vcn^a. xk^ai n²vq^a vgw²n0 C| k^aicm cu²xgm gugo²p{gk ul go²n²gu xgu²n²gm gf| gwg. p{w^a i qf^a u jkf gi x²t x² vgw²n0 C|²rgv²t²ng o quv o^at o gi ngj gv ugp vku v^ap^amqwc hxcn²h²thkgn w0

MAnu ngi pgo uqnev x^anq| qw0 Vcn^ap j qo nqnc ngw o ci cucdd. jclc r gfk i c x^arcul v²m v²l^ap i {²tgdd0 Xqp^auck o gi ngo²p{gf vgn0 Gi {nqt ncteuÀ hÀu crn²lc o quv o^at x^arcucdd. ul²ngugd. ô hqi ck o^at pgo xkn^ai pcm gn qn^a i {cntcp. dca^avk dgu²ni g²v u n³/4dgp. o kv c| gn w0 P gj gl gddgp o grgi ul km o²i ng/ x²ud² n³/4r²ngp{. o kv xqn0 N^a| cf» vgo²ul g²v h²/ ng| k i {cntcp uko w²nq{ ku ô Ocjo wf Ughngv rc/ u²jql r gfk i gi {gpgup grtci cf»²u ngf xgu0 C rt»/ h²vc vknq w kcn^av ugo xgv o gi ô c ul gu| v pgo vAn/ | qw hqto^adcp. o kv k i ku ngf xgn²0 G| ku vgw v³/pntg xgu²l²v²uo^al^aw0

00 P²|| ãm o quv r gfk i gi {ul gt c| v ku o gi. j q/ i {cp ku^amqw gl c h²thkÀ ul go dgp c|| cn c rtqd^ao^a/ xcn co k d^ato gn| gwt»rck nqt^av^a v dk qp{^atc hqi/ ncmq| vvc xqpc c| nqt^adcpA Vwf pkn^akm c p u^al^a r²u²gn²u euc^afl^a crer^a uuc^al0

Ucl^au^ai qu. nAn²p n²tf²u gl ku< o gtv Mgo^an gd/ dgp ku mAn²/4. gi {²pk wcn^av l^atv x²i ki 0 Fg gj j gl gn dd gi { rkn^acv^a vngmxgvpkc v³/4³/4neuc^afl^ak²rgvtg0

C o qj co g^ap gi {j^a| k²u xk^ai k v³/4x²p{gm vAn/ ul ki qtÀcp tgp/ gl v²m Mgo^an ul^ao^atc c euc^afl^aqi n²t/ f²ugk0 O qj co g^ap h²thkpcm ngi h²/ngdd p²i { v³/4x²/ p{gu hrgu²i g ngj gvgw ô²ur gfk i O qj co g^a rt»h²vc v/ p^aeuc ul gtl^apv šo^au p²r v³/4| ud n0 Gi {ul gttg vj^av eucm p²i { hrgu²i g ngj gv c v³/4³/4pgn0 O^auqf kn^av ku rgtul g eucm c v³/4x²p{gu hqto^am ul ki qtÀ dgvt^au^axcn

xg j g0 C $\sqrt[3]{4/3}m$ h²tlpgm vj^av pgo ngm o gi x^atpkc
 gnu hrgu²i g j cñ^av xci { c x^an^rgtv. j qi { o^auqf/
 ul qt ku o gi j^a | cuqf j cuucn0

C |²tv x^an^au $\sqrt[3]{4/3}m$ tu^ai dcp ku h²vlgw= eucm
 2rrgp lgrgp²ngp { gp nggi { ul gt u¹lgw hqto^adcp0 J c
 c h²tl j kxcvncup nko qpfvc c šdqu/cfko ÷/qv ô šgn/
 x^anco ô< gnj cv²tq |^auc o^atku $\sqrt[3]{4}x^2p$ {gtgl x² rgw0 C
 vct²uf¹ c o qj co gf^ap lqi dcp ku kp² | o²p { gu²u c |
 grk^anv p o^auqf ul qt ku h²tlj gl o gj gv²w0

C o qj co gf^ap hrgu²i gm^ancpf » kki { ngf²ug.
 h²n²ngp { ngf²ug c | qpdc c o gu²m dktqfcm^adc vct/
 vq | kn0 C $\sqrt[3]{4}x^2p$ { gu j kxgugm rcm²j gn { g vgnugp gm²/
 h²p¹lgw²u m²h²p j^a | vct²uv xgl gv²w0 O kpf gi { knk ul q/
 rkf. tgpfgu. rqn^atk gugvgnkp v h²tk j^a | vct²u0
 Gwt » r^axcn ul go dgp c | c rgi h dd m²h²pdu²i j qi { Mg/
 rvgp c | gnu j kxgu j kxcvncup ku wfqw c o^aukn » n
 ô²u j qi { c o qj co gf^ap h²tl ô vñ^ap 2rrgp gl²tv
 ô ki c | u²i qucp qu | vqc o gi xci { qp^av²u< ul gtgn/
 o²vku c hrgu²i gkn² $\sqrt[3]{4}x^0$

C $\sqrt[3]{4}dpgl$ u²i gi { 2dn²pv kn^add rjgv u²i pgm
 ul^ao¹qvw. o kp v lqi pcn0 Ogtv eucm c | ki gp l » o » f²À
 go dgt vctj cvqw $\sqrt[3]{4}d$ $\sqrt[3]{4}x^2p$ { gu cuu | qp { v0 C l » o » f²À
 go dgtgm r g f ki gi { gvnp qtul^ai dcp ulpeugpgm $\sqrt[3]{4}d$ /
 u²i dgp0 C h²f o xgupgm $\sqrt[3]{4/3}m$ tu^ai dcp j kxcvncup
 ku eucm gi { hrgu²i g rj gv²w0 O kpgm ku rgw xqpc $\sqrt[3]{4}d$ <
 ugo j^a | vct²uk o vñ^av. ugo gn²v²uv pgo cfj cvqw
 xqpc $\sqrt[3]{4}dpgn0$

C eucñ^afk 2rgv vj^av xcn¹a dcp j cuqpn » xqrv c |
 gwt » rckj q | < m²h²p³ugp. co¹ c t²ik $\sqrt[3]{4}x^2p$ { gm vku /
 vngvg vgn²gu gtgl²dgp^a mqw hgp0

C $\sqrt[3]{4/3}m$ qwj qp ku rqn^atk ul kpv p {^atur qn^atk
 eucñ^afk n²rgv o wcv0 Hrgu²i. cr » u. cp { » u. fqn^aq | ».
 j kxcvnc l^at » h²tk i { gtngm 2rqñ. l » hqto^ap
 o kpf gp j^a | dcp hencñ^a rj cv » v¹ r wuqm o kp v p^anvpn0 C
 šugtō. c Mqt^ap²u gtn²reuu | cd^an²qm ul gtpv²n $\sqrt[3]{4}$
 t³m pci { wcm 2rpgm eucm nku² šd x¹lgwō j^a | vct²u/
 ucñ0

C nup | gtxcv¹k pci { wcm c $\sqrt[3]{4}x^2p$ { gu p²i { hrg/
 u²i o czko wo qv $\sqrt[3]{4}dpg$ { ktg ki²p { dgxgw²m u v gl gp/
 n¹k²ñku vctvqwemp ngvc rñ²uwñdcp. r crq²lvñdcp0

šP knkrlō xqrv gl gmpgm c v̄4x²p{gu||gw ul gtgv npgm
 c pngx0 Qf crku| nqm hcvn r̄p{qm xqncm gl gm= o kp/
 fgptg. h̄p̄qo cdd j^a| vct^vuk o wpr̄n̄ntc. j^o|²utg. xct/
 t^autc ku jcul p^an^am ngv0 šQf cō v̄4³m²Ān ul qd^av lg/
 r̄gp< qf crku| m r gfkī šul qdc/r̄g^ap{v= o^at o ci c c
 p²x ku o wcvlc c| kp²|o²p{ l̄mgi²v²u gtgf g^v0 Gp/
 pgm c| kp²|o²p{pgm xqrv gi { l> qrf cr< c h̄qt̄>x²t
 v̄4³m²n̄4 v ô²u gl v dĀul n̄p o qpf l^am ô . pgo ul Ā/
 rgvj gvgw v̄4x²p{v̄rgp i {gtgn0 Wi {cpku o kpf gp j /
 pgm xqrv i c| f^alc²u c j^a| k qf crku| nqm i {gto gngk ku
 v̄rl̄gugp v̄4x²p{gupgmul^a o ||qwcn#

J c gi {/gi { pci {qp ul gtgpeu²u r̄g^ap{ h̄mgtĀv c
 o gugdgrik ul wn^apr cr̄q^vdc²u šul gt^alrlō rgw= gppgm
 uqturgi gpf^alc²xv̄k gf gngp^av²iv j gi {k h̄cveunf l^apcm
 n̄geungr^aul vtck n̄4³4x0 O ci c c ul wn^ap gi²ul c r̄gi /
 Ācdd kf n̄kī . c ul gpv Tco cf^ap j>per v̄k gp³4³ km
 per l^ap v̄k gpn^v i {3p{3/4 .²tkpvgv̄gp ul qn^an̄r̄g^ap{v
 n̄erqw j cr̄wxcn>k>r̄0 Gt̄g c p̄r̄tc n̄4xgng| gw
 šc| Gt | lu| cn̄l̄cō. c Ngk̄wd Tck̄jcd. co gn̄gp v̄Āp/
 f²tk l̄p{dgp Āul qw c r̄cr̄qvc0 Pci { ul wn^apk ngi {
 ²tv̄g c| v c o k̄pku| v̄gtv xci { r̄cu^av j c c eu^aul^at. c r̄f /
 p{qm gi {kn̄^vo^aukn̄^v n̄^udd v̄qx^addcl^apf²n̄q| vc
 pgn̄0

Cj qi {cp c| qpdcp gi {tg l̄qddcp c h̄r̄k̄k̄i quqf^au
 k^ap{^adcp j cr̄fv c M̄rgvtg n̄uucp/n̄uucp^aul k^ati >
 gwt>rck o xgn f²u< c v̄4³m p m l>t²ul g. m̄Ā³p³ugp
 c h x^atqudcp. tqj co qucp^av̄j cuqpwv c p{wi cvk p m
 k^ap{^adcp0

C v̄4³m p m c| k̄l̄Ā³4³m h̄qt̄tcf cr̄qo kf gl²p. o^at
 v̄Āp{qo >t²ul v̄gwt>rck³4³ gvdgp l^atv̄cn0

C| Ā gul o²m c| švj wxgv o gl cdgvj ĀmĀlgvvcf c/
 rgvō ô švgux²tk²i. gi {gpn u²i. ul cdcf u^ai. ki c| u^a/
 i qu^ai ô l̄gn| cxck jct̄uqi l^am v̄rg V³4³m̄tu|^ai qv
 ²u xgtf gu^vm c|^a ulck r̄ctv̄nev ku0 O quv h̄gn| cdcf wv
 c v̄4³m p ku. o²i r gfkī v̄c̄r̄p v̄Āj ktv̄rgp0 C ul Āhtc/
 |ugw o q| i cr̄qo M̄rgvtg ku gr̄lwqw v̄Ā^auck o gngw.
 ²lu| cn̄l̄ >. ul go²to gv̄rgpĀn³4³ n̄4 p m dqv^apn̄q| /
 cv̄^am o gi c| kf ugdd v̄4³4³m l>|| r̄f u²v0 C eu^aul^atk
 euc̄r̄f v̄ci lck o ci w̄m l^atv̄cm gn c tqu| r²rf^axci0
 O ci^apcm K̄0 Cdf w̄n J co kf pcm c fgtq| kp^aiv ul wn^ap/

pckm nřv nřp{c. c| qtqu| xgt I j^a| k Q| o^a p ruc. c
 ř nřxpck qtqu| nřpō o gp{gk cfvc m d uři gu dgu|²f/
 vřti {cvc u| vco dwkr nřv{nřpcn0

C| gz/u| wvř p nřp{ck o²i hřthřwj^adcp ku o wcv/
 nq| vcm p{kx^apqucp= gi {km eki ctgw^av c o^aukm wřp
 i {Äřvq wř m o gi = r g| ui | vgm ô i {cntcp Ä { xkugř/
 nřfvcm c p{kx^apquř^ai gn w. jqi { c nřto^ap{| cv ku
 nřp{vřrgp xqv k i gp u| k i qtÄ tgp f u| cd^an{qnj q| p{Äřk0
 O kpf g| r g f ki o²i c| k l Äř³4³mř³4mř³4přgmku uqmxqn0

C h x^atqu gi²u| p²r²pgm o ci cvřvřuc o gi x^an/
 vq| qw0 U| gtgr gv nřr c p 0 D^at o²i. gwt»rck twj^alc
 gmgp²tg. pgo nřj gv vř³4³m p v hř vřqn hřtgf| ug. lcu/
 o cm p²mÄn c| we^ap nřvpk c nř³4xgvnř| gu| vřpf mřgp
 o kpf i {cntcddep hřtfw n gn. jqi { vřtucuř³4u| gl³4g/
 vřrgnřp c p m ku dgpv xcpccm ô rgtu| g hř vřqn p²mÄn
 ô c hřthřk| qd^adcp. gi {Äw c hřthřcm mř0 Eucm pg euq/
 f^amq|| wpm jqi { g| v mÄř³4p o gi ngm go nřvřpÄpn=
 lqdd j^a| dcp. Ur cp{qnřtu|^ai dcp. T»o^adcp. fg o²i
 Mř³4²r/Gwt»r^adcp²u c Dcmřp/^anco qndcp ugo pc/
 i {qp u| qmc c| gn nřn j^a| nř^ap{c hřthřxgp f²i²v ô
 gi {gf Änhqi cf pk00

Rętc. I cřvc we^ak o quv ku vřrg xcpccm eułpqu. hř/
 vřqn| cvřp. nřtgu|^vp{ p mřnř0 " to²p{. nřwnř| wuk
 i³4³4. nřxcpvgk hřpctkřvc. eugt nřu| u|²r u²i gm l^at/
 pcnřnřpřgm | cxtcvřpwn x^au^atqřpcm x^anři cvřcm c|
 řCxtgřrc| ctkřco õ. c Pci { Dc|^at nř³4gřdgp řřx Ä/
 nřvgnřgp. xci { c Dcd/Cřk F| ucf guu| kř. Cvo gk^apqp<
 l^atpcm dg{qi j nřk d^anřndc. j cpi xgtugř{gntg. nřci |/
^atp{l^avřnřmtc ku²r r g p g nři gv0 Wi {gpgxg| gw řřvřt/
 ucukř nřgvõ²přgm²u gi {tg d^avřcddep hřti qnřfpcm c
 hřthřcm nř³4³40

O wu| vhc Mgo^an tpci { ku g| gnđ n c nřp/
 ucvpk^ar qnřk řcpi {cřnřnd»nř eukř gi gvgw g| gnđgp
 c| kř nřgp0 G| c nř³4p{g| gv. c vř³4³4nřtu|^ai k p nř
 pgnõ u| křvg O wu| vhc Mgo^an u| go gř vř^atc vř³4/
 vřpv go cpękr^ařuc Äř³4vg c| vřp t^a hřnřu| qwcp c
 d²nř gi²v Mgo^an^anř ur qp v^atc ku c j^a| cuř^ai nř³4
 vřuugn u| go dgp0 Gi²u| pgo k²nřvřv. hřhřqi^au^av ku
 g| c hřvc mřtk u| vco dwk²nřv dghřnř^auqnc gř/
 j c vřtq| »cp0 C j^a| cuř^ai i qpf qřvc gi {gn tg o guu| g

xqnv v r̄g0 Ugo c r̄gm̄k gi {gf ãñ² v. ugo c eucñ¹fk o g/
 r̄gi u²i j k̄ p{c. ugo c v̄ej pkn̄k r̄nḡgo ḡv̄ḡp̄²i gm
 o k̄p̄v h |²u. o quc̄v̄u. xcttª u. p̄go lª v̄l j̄c̄v̄c̄m pci {
 u| ḡt̄ḡr̄ḡv c h̄c̄v̄c̄n v̄u| v j² v̄ñ⁴ per k r̄t̄q̄d̄r̄ºª k uq̄tª d̄c̄p0
 M̄goª n cp{lª x̄c̄n ² n̄v U c̄r̄p̄k̄n̄k̄d̄ḡp0 M̄goª n r̄gt̄u| g v̄/
 o q̄i c̄w̄c r² p| | gn ku ² f̄ḡūc̄p{lª x̄c̄n n̄ñ⁴ ³⁄⁴ ūḡp v̄c̄t̄v̄q̄w jª |/
 v̄c̄t̄v̄ª uª v. ô f̄g cp{lc. g| c šl»ª uª i qu v̄k̄ñ¹ t̄p ² u jª |/
 x̄g| ḡv p ð. x̄ku| q̄p̄v o k̄p̄f̄ ḡp̄t n i q̄p̄f̄ q̄ūq̄f̄ q̄w jª | v̄c̄/
 v̄ ūw̄ñ¹ d̄c̄p0 O w̄u| v̄c̄f̄ p̄c̄m euc̄m c v̄t̄f̄ ḡw̄ c̄u| v̄c̄r̄j̄ q| r̄n̄r̄
 r̄ḡw ã̄p̄l̄g ² u c h̄ḡj² t̄p̄go u u| ḡm̄² p{d̄g p{ã̄p̄k̄ v̄u| v̄c
 i c̄m̄² t² t̄v0 P̄go j k̄ p{| q̄w M̄goª r̄p̄c̄m ugo o k co k
 ḡu|² d̄g l̄w̄c̄v̄j̄ c̄w̄c x̄q̄p̄c< l» r̄ḡp̄p̄g o gi p u ã̄p̄k0 P m
 x̄q̄ñ̄c̄m n̄ñ⁴ ã̄ñ⁴ ³⁄⁴ w̄g ² r̄r̄ ḡp̄ ḡr̄i ḡp. c̄n̄k̄m j̄c̄l̄r̄c̄p̄f̄» m x̄q̄ñ̄c̄m
 o gi d̄c̄tª v̄u| p̄k x̄ḡr̄g. c| q̄w̄j̄ q̄p̄v r̄ḡf̄ k̄i ² f̄ḡūc̄p{lc p{ã̄/
 v̄q̄w̄c0

O w̄u| v̄c̄h̄c M̄goª n ² r̄ḡv² v p{w̄i q̄f̄ v̄c̄p c| q̄t̄u|ª i ² u ūc/
 lª v l³⁄⁴ l² p̄ḡm u| ḡp̄v̄r̄j̄ ḡw̄g0 O q| iª uk u| c̄d̄c̄f̄ uª iª v p̄go
 iª v̄q̄ñ̄c ugo o k ² u ūḡp̄ñ¹ Eucñ¹fk o gi n̄ñ⁴ ³⁄⁴ ū² i ḡn̄ḡv p̄go
 x̄ḡw c p{c̄ñ¹ d̄c. j̄q̄i { c̄ñ̄f̄ª n̄{q| |ª m o v̄p̄ñ¹ lª d̄c̄p. e² n̄
 l̄c̄k ḡr̄f̄² u² d̄ḡp0 U ã̄ñ² i g ku x̄q̄ñ̄v c| q̄p̄d̄c̄p c| ḡt m³⁄⁴ u|/
 r̄q̄p̄v̄u|ª uª t̄c. j̄c x̄c̄r̄o k ḡt̄ḡf̄ o² p{v c̄ñ̄t̄v ḡr̄f̄ t̄p̄k
 o ḡt̄v c i { | ḡf̄ ḡm̄ gu h̄q̄t̄t̄c̄f̄ c̄ñ̄q̄o w̄ª p ugo c| u| g/
 o² n̄{k ugo c| q̄t̄u|ª i r̄q̄r̄k̄ñ̄k̄ j̄ḡñ{| ḡv̄ euḡr̄ r̄ḡv ugo
 x̄q̄ñ̄v d̄k̄ v̄c̄» d̄d. o k̄p̄v c| c̄d̄f̄ w̄j̄ c̄o k̄f̄ k̄ t̄ḡp̄f̄ u| ḡt w̄q̄ñ̄»
 ² x̄ḡl̄d̄ḡp0 C| ḡñ̄u h̄q̄t̄t̄c̄f̄ c̄ñ̄q̄o ô o k̄p̄v o q̄p̄f̄ q̄w̄m̄ ô
 o gi h̄ḡr̄f̄ n̄ḡl̄ ḡw j u² i gu ugi f̄v v̄ t̄uª t» n ô ² u ã̄i {ñ¹ v
 u| k̄m ô c| ã̄l v̄t̄c̄m ḡr̄f̄ i i² gn ku x̄q̄ñ̄c̄m h̄q̄i r̄c̄r̄c̄ c| ³⁄⁴/
 o ci w̄ñ¹ d̄c̄l̄c̄k̄x̄c̄ñ

O ḡt̄v o k̄c̄r̄w O w̄u| v̄c̄h̄c M̄goª n t̄p̄c̄i { ã̄l̄t̄c U c̄ñ̄/
 p̄k̄ñ¹ d̄ḡp. t² i kª n̄q̄oª ūj̄ ḡñ² p lª t r̄q̄r̄k̄ñ̄k̄ ³⁄⁴ u| ḡl³⁄⁴ k̄ḡv̄/
 r̄ḡñ̄t̄g. j² v̄ñ⁴ per r̄ḡf̄ k̄i euc̄r̄c̄v̄ x̄c̄n i {c̄ñ̄q̄t̄r̄v̄q| k̄m ² u
 P̄c̄r» r̄ḡq̄p̄v. O q̄ñ̄ñ¹ v̄ v̄c̄p̄w̄ª p{q| |c. c i { | v̄gu h̄q̄t/
 t̄c̄f̄ c̄ñ̄q̄o x̄g|² t̄ḡk ūj̄ q̄i {ego w̄f̄ p̄c̄m d² n̄ñ̄ ūḡp o gi/
 gi {g| p̄k ² u q̄u| v̄q| n̄q̄f̄ p̄k c o gi j» f̄q̄w j̄c̄v̄c̄m q̄p0
 O w̄u| v̄c̄h̄c M̄goª n̄v c| gi² u| k̄f̄ c̄r̄w gi {ḡv̄ḡp n̄k̄ūḡd̄/
 h̄c̄l̄c̄ n̄k̄ ã̄p̄v̄ḡv² u ² t̄k< J w̄u| ḡk̄p T̄k̄c r̄c̄ūc v̄ d̄q̄t̄p̄q̄ñ̄v
 n̄k̄² t̄j̄ ḡk̄ gn U c̄ñ̄p̄k̄ñ¹ d̄ n o k̄p̄v ugi² f̄ v̄u| v ² u o gi h̄k̄/
 i {gn. c h̄t̄c̄p̄ēk̄q̄t̄u|ª i k̄ j̄c̄f̄ i {c̄ñ̄q̄t̄r̄v̄q̄m̄t̄c0 v ² u
 J w̄u| ḡk̄p T̄k̄c r̄c̄uª v m̄ã̄ñ¹ k̄ n̄k̄ c| k̄ñ¹ ã̄ñ⁴ ³⁄⁴ m̄ñ̄t̄oª p{
 c h̄t̄c̄p̄ēk̄ª m o gi j f̄k̄ª uª t̄c0 C h̄t̄c̄p̄ēk̄q̄t̄u|ª i k̄ w̄c|ª u

jktvgrpp l^{3/4}w Mgo^an ul^ao^atc²u jktvgrpp ku hglg| f^{3/4}w
 dg0 G| c| wc|^au gn ul^{3/4}xk|kc o²i o kpfki hcvn Mg/
 o^akv p{wi cvgt»rck n^{3/4}p{g| gvdg. cj qn ul cdcf go dg/
 tgm ul cdcf l²thcm²u ul cdcf eu| qp{qm²rgn0 C
 t^{3/4}kf kf gli vct» nkt^apf w^au. j c| c^vtv^g w^ap o²n{gp
 gri qpf qm| vclc O w| vhc Mgo^an0 K gi c| c o²i
 ul qti cm cup lgi {g| per n»h²g^vdg. o kpv xcrcj c0
 Hcpek^awn ku o gi vpw^a xcrc0 gn{gu0 P²o gv²n cpi qm^a
 c| qpdcj c^an²ki ugo vpw^ao gi 0

O w| vhc Mgo^an j c| c^vtv^g w^ap ku²v nkn|fk
 c| go dgk kki {u²i²u i qpqu| u^ai < c htcpekqtul^aik
 wcv kki {rkm v rg vku| w^atuck0 M^{3/4}p{grm dgu|²fgm²u
 n²lgrpp²ugm o kcw vku| w^atuck dg^atw^am²u hgi {grm k
 krgvg dgeu²rgv²i {k gr^at^au kpf wn gmgp0 Mku²km j qi {
 vku| vlgk c| ²À nqto^ap{ gmgp n²| ²l²c0 O gi ku d²pv/
 km hrgwgugk²u grkgul km v rg pgo t²i ncrqw ul crd/
 plnk g| tgrf rctceupqm^ai^a0 Mgo^an pgo pci {qp d^ap/
 m^af kngo kcw—i {ku o kpf gp o gi hgi o cif x^anq| pl0

O qj co gf Tgu^af Ghgpfk c rgn^{3/4}u^{3/4}pv gz/ul w/
 v^ap rgi kf ugdd vguv²tg o quv U| vco dwdcp c| ²À ul w/
 v^ap0 K0 Cdf wn J co kf cdrcnk^v o²i o gi tgo gi vgw
 c| ²À eu^aul^at vku| vgrv²tg n w ul^a| gi {^ai {²À²u0 C
 r w»nete²À ngrfxgu hgn p gp xk^ai qun²m ul go^{3/4}gi /
²À. o kpf^{3/4}u| g n²v²xxgn hcvrcdd. o kpv Cdf wn J co kf.
 vj^av o quv jcvcpn²v gul vgp^a u0 C ul go g l»u^ai qu=
 xcuci hgi²tgu dclw| c xcp= p²j qn gi {/n²v x^{3/4}u^{3/4}gu
 ul^anu|^{3/4} fkm dgr0

K0 Cdf wn J co kf. m²À²p^{3/4}ugp wcm^au^apcm x²i g
 hgr². gt ugp hki {gnvgw^{3/4}eu²0 Rcm²v²l^av ô v²rgp c
 Fqrkpc Dci gugv. p{^atqp c \ kpf| uktrk M²w ô eucm
 rxcun²l²tgwgn xqn ul cdcf c v»p^{3/4}u^{3/4}upgm gij ci {/
 plc0 J c^anu²ek^aqw gi { o^aukm rcm²v²dc. fgv²km
 n²l²t²m²u ngv²gm nkxgn p²|^{3/4}u| g0 Cdf wn J co kf v²d/
 dk h²x²tgkxgn O qj co gf T²ucf Ghgpfk c Fqm c/Dci /
 eugdep. c šHgn^{3/4}u^{3/4}w Mgt²v²/dgp. co gn{gv o²i^{3/4}xgp
²xg K0 Cdf wn O gf| ukf ul w^ap²r²l²gw. xci { c \ kpf /
 | uktrk M²w rcm²v²l^adcp²n. M²qpu²cp²r qn{ w^an
²ul cntc0 O kpf n²v rcm²v²l^av p²i {o²v²tg²u hcn xgw
 m^atw0 C ul w^ap c| gi {km rcm²v²gr² šx²ngv²À²nk

ugdd eugpf trcmcp{^av 2r ¶wgvw0 Kw^ampf»cp p²i {
|^au|n>cnl^amqo^auq|qw0 P go ki gp ul^ao ¶j cvqw t^a c
v»p^{3/4}3/4n^{3/4}u. jqi { v»ptc ngt Ñn xcrcj c. ô 2rrgp c|/
2tv. o gtv qn{cp ngx²uugn xqrv hcvcrdd d^av{l^ap^an
K0 Cdf wn J co kf p^an c| wcmqf»p^ar0 Vt»p^{3/4}3/4n^{3/4}uk
jgn{|gv^dn ô o kpf ki c rgi kf ugdd Q|o^ap jgtegi²
c v»p ô eucm c| n^{3/4}xgvngl gw. jqi { Cdf wn J cm kf ô
uk dcd^at. fg pgo nqi knv jkl^ap xcn» ngrgvk vcf ¶
el>nj q| j ¶xgp ô o k²n v³xqrcdd ki {gnngl gw vctvcpk
c| wf xctv»n²u c rqrkn^awr0 Tgu^af vj^av |cxctvcrp
pwn hji rcmq|j cvqw ngrfxgu n^{3/4}v kxgn< o ci c ku ktqi c/
vw. hqtf ¶i cvqw. F|ugr ngr f k p Two k n^{3/4}ngo²p{gkd n
pgo ngxgugdd. o kpv j Æu| gl gt ut>h^ap{k xgtugv wf qw
n^{3/4}k Æt #

Oqj co gf Tgu^af Ghgpfk ô o quv o^at X0 Oqj c/
o gf. ô c| Æ u|wn³p. nkdgt^aiku i qpf qmql^au Æ go dgt
xqn0 Vt»p^{3/4}3/4n^{3/4}u nqt^adcp l>n o gi vcpwnc. jqi { rqrk/
wnc kx²rgo²p{vp{kx^ap ¶kcpkxgul²n{gu0

Vt»ptcr²rg w³p j co ctqucp j ¶t g o gpv l> u| ¶
x²pgn0 Wcmqf^auc gu pcr l^ap v^{3/4}v³pv. jqi { 2rrgp
rcmq³lc r³reu l²p^amv. xcrc o k j kxcvcmu Ætc n³u|gp.
co knqt lgrgp²uv nerqw ctt>n jql{ c rrvctw|v cvqw
hji n{qm ô pci {t²u|v u|go²n{gu gngpu²i gk ô o quv
^ampcm d ¶^akm gn w0 C l>ngm u|wn³p. ô cnkj gl gi {
per crew v^{3/4}dd i tewu³n» u Æti^{3/4}p{hwqw dg Gwt>r^adc.
Cl tkv²u f|uk wcmqf»k>n o kpv gn fl²j gl j^atqo
²xv kf crew. ô nklgrgpv gw. jqi { r g f ki o gi dq/
eu^av gl gmpgm c u|gtgpeu²vpgpnm²u grtgpfgk< pg
guu²m d^ap w^auwn0 Nwhk²u J crk \ kc dgl. c| Æ cflw
v³puqm jcv³tq|vcrpwn p²|vgm 3/4u|g J qtuk rcuc v³/
dqtpqmmen c nevpc k u^atp{ugi²ffgr0 C icrc o drgm
n^{3/4}v /u|wn³p gl Æven ki gp gt²n{gupgm o wcvml qw<
nklgrgpv gw. jqi { ô vcrqf wv ugo o q/f wn jgn²t n
co ¶i pgo vgrgu Æn c rctcpeuc0 C nk²tg v x²itg ku
o gi jclqv c eu^au^at cnetev gn w< i {qtuhw^at tq/
jcpvc v^{3/4}x²p{u|²ntg c u|wn³pkngi {grgo p ¶²xgr0

X0 Oqj co gf d>n³pvw²u ctek⁰o^apcm gi { t^apf w
n³uc p²m Æn kpf wn rghgr c r³reu p0 Eucm euwnqw nq/
euk^adcp. cj qn ugpnk ugo n³wc. ngtngf gw o gi gr³i g/
f gwo quqn{²u l>ngf x i^{3/4}t³eung t>|ucul ¶p cte^ap0

Kf gp go dgt xqnv c| Àl ul wñ²p0 Cdf wn J co kf w»fc.
 cnkpgm O wul vhc Mgo^an pci { ucl^arv²tc c| qpdep
 pgo uqmul cxc xqn0

C| Àl ul wñ²p²u c| Àl²tc gnu²xgk uqm gug/
 o²p{v j q| vñ0 C hqttefcmo ô o kpv o qpfqwwm ô
 pgo wfqw Àt^a rppk ucl^av o ci^ap ugo. fg c| qtu^ai
 3/4u| gu dclclp o²i ngx²ud²0

C Octqm» o kcwk pgo | gñ²4 k hgu ãnu²i i gn ng| /
 f f³4w c dcl0 C| gi²ul o w wñ^ap xkñⁱ hñki { gn gl gm
 tg c| gugo²p{gn²g0 O^auww ku hqtqpi^au xcp c| kñⁱo
 xkñⁱdcp< c| gn | 3/4w. Qf guu^adc o gpgm ãnv Mcl| uct/
 ucj < O qj co gf Crik Rgt| ulc xqnv vtcmaf »lc. rweeucn
²u qtqu| nu^anu^ai { Àxcn xgtk ul²v c| škl ãr gt| ucõ
 j cxf » r^atvqñ0 Tgucwt^arlc ku ukngttgn v »pl^av0 M²4/
 xgvrgp ãn c 3/43/4m dktqfcmo j cv²tclp ku nrgvng| pgm
 x^atcvcp xlj cthgn n0 V³4dd j gn{gp ku gi {ul gttg0 Lg/
 o gpdgp²u Cuu0 kdc pñ | cf^au ãk hgn c hgl²v0 C| 3/43/4m
 n² hqtqpi » j gi {k ft ã qm ku ñ | qpi cpcm ãtc0 L>/
 hqto^ap²xt n²xtg nk ã wpcm ãcddcp g| gm c j gn{k
 hqtqpi^auqm²u ul^ao vcrp 3/43/4m ncvp^av nñ^appcm c
 dktqfcmo j cv²tclt c0 Mcvp^alc r gfk c| Àl nu²o^ap { /
 | cpcm ukpeu 3/4dd c t²i kp²n0 fi { ãlc. o wñ²ek »lc. euc/
 vj cl »lc o²i ngx²ud²0

C ngi pci { qdd dcl c| qpdep o²i ugo g| 0 C| ki c| k
 x²tgu j cte. c n²u ddk xkñⁱ j^adqt ã gi { km j crx^ap { gn /
 l^avñc. o^auww ng| f f kn0 Vtk riku²ppgm c j ctepcm c
 ul ñ j gn{g0 G| c| cffki gnj cp { ci qnv cht knck 3/43/4m dk
 »m ngul o quv j kvrgp Gku| cm^alc0 C| qncul qm ñ v
 l^am c 3/43/4m i { gpi gu²i²v0 3; 34/dgp o gi v²o cf l^am Vtk
 riku²v0 C rctvnev c| qppen gn ku hqi rñ^an0 Dgpv c
 ul^atc| h³4f³4p c| qpdep. c| Gi { kr vqo qp^aveugo r²ul gw
 j c| chku 3/43/4m vku vgm ô o kpf gi { kn ãm gi { /ë gi { tgi k
 o gpwgn²tvhgnô ul gtxg| knc| gmgp^anñ u0

O wul vhc Mgo^an gmnqt Ai { ñ vlc. l » ngul gn²xq| /
 plc nku² U| cnkpnkd n0 Wple o^at c uqm kki { cteqv.
 cnkm gmgp²i gk²u o²i ku dcl^av lcpem o wcv^am o ci w
 nev0 C htcpekcqtu^ai k ãv w²p gugw hgi { gm k gn^at^auqm
 co ãi { ku gmgf xgvrgp ñ gw²m c vkr riku k gugo²p { gm
 r gfk hñki cv^am n²r | gng²v0 Xkuu| cgo ñ nu| km c t²i k

dku| gdek ²u cne²ck nērcpfle²tc ku ²u o kpf gp gtgl²xgn
c| qp xcp. j qi { Àpcm kpf wj cuuqp Àtc c Mērcpf k^a/
p{^a dc (00

—kgtx²v ukngt ku nqtqp^a|| c0 Gmgpu²i gk pgo d^ap/
l^am ô fg o²i o ci c rtqvmqtc. O c j o wf Ughngv ugo .
cnk n³4 dgp j cf ãi { o kpk| vgt ngw. ô j c0 Mgo^an tpci {
gi { kf tg gnv plm c u| go gn r0 O c j o wf Ughngv. Mgo^an
l>cnet>lc. ctte i qpfqn x²fgpeg o clf Vtk qrf|u| dcp
n²v²i dg pgo xqj cv» nēvqck ²tf go gngv u| gtgl² u
gl j cu| pqu ngul u^ao^atc0 Gmgpu²i gk r gfk i ctte i qp/
f qpem< Vtk qrk| dcp ô gn ku ngjgv gupk(00 Vcñ p
o²i c ngi hēvcredd xgl²tnētk gmgpu²i²pgm ku c| l^at/
j cv gpp²n c i qpf qrcv^an c| gul²dgp< ..gi { tpci u^ao /
o cnngxgugdd r^r gn gn vgo uul gn²u vxcuul cr(000

O wul vhc Mgo^an vj^av c| kngv²ngugm j gn{ gur²u²/
xgn Àpcm kpf wn t³k kf gup0 f ip²xtg u| »n» Àvgx²ngn
Gi { kr qo qp ngtgu| vñ o kpv r qn^atk wcu wc| kn0 P g/
xg< Ugth dgl= hqi rcmu|^auc< c šVcplpō e^op . pci {
nūpucpv^ar qn{ k per kcr o wpnev^atuc0 J^ato cp k/
f wpcm U| cmplknd r0 M³4 ãñ ãm eucm o ci c²tk gn Vtk
r qrk| v= c o^aukm n²v dca^avq o^at Crgzcpf tk²dcp grhqi /
l^am c| gi { kr qo k j cv»u^ai qn0 Mgo^an c| qpdcp gr²tng/
| km c j cte²ttg ²u lgrgpvng| km c j ctedcp^am» eucrc/
vqm rctcpeupqñ^ap^ar0 Gpxgt dgl. cnk o kpf gp ãw qw
xcp. cj qn xgtg²ngf pk ngm o^at Mgo^an gn w c| À j cf//
u| p²ttg. Vtk qrk| dc²tng| gw0 .. ku u| gtxg| k c| gmgp/
^an²u0 Fg co k c hqpvu Mgo^an u^ao ktc Gpxgt o^auww
rctcpeupqñ qn o kpv Mgo^ar0 Dgpi j^a| k n³4 gr²dgp. Fgt/
p^ap^an o guu| g Vtk qrk| »n ngrgtg. ngul Mgo^an t³k k/
fgupp c| gi { km ltqpvu| cneul rctcpeupqñ0 Gpxgt.
l> o guu| g³ v rg. Vtk qrk| n³4 ãñ vcp{^a| kn0 Mgo^an o gi /
u| gtxg| k c dgf wlpqnd>n c| gnu . tgpfgu ltqpvrcmwc/
vñ^av0 J cteqn²u u| gpxgf. v tk c i rkkdrk| u| grgv. u| qo /
lã^ai qv² j u²i gv0 J ukgu²i g c| qpdcp o²i ku j k^adc/
xcn>0

(00 3; 34 qm> dgt 3: /^ap p²v^am cñ^a c| qrcu| qm²u v³4³/
n²4m c| qvej {/k d²n²v0 Vtk qrk| ô c xk^ai j cvcm cm
n²k^apu^ai^atc ô c| qrcu| qn² ngw0 Gpxgt ²u gmgpñ duc.
O wul vhc Mgo^an Àtc j c| cwc| qw< gtgf o²p{ pgo
nūl qt ã w j ctecknē0 Gpxgt c ukxcvi dcp ugo uqnev

²tlpvn| gw Mgo^a mcn ô qf c j c | c o²i ngxgugddgv ô
 c | qpdc p hgr|gi { gl v²nc gl n²u²i vgrp. v³/4^vpgm k v²p { .
 j qi { Mgo^a n c j qn rj gvgw. ^atvw Gpxgtpgm p { kncp
 j cpi q | vqw o gi lgi { | ²ugkgn .. t³/n³/4 u mtkm l^axcn ²u
 g | gn o quv o^at o ci c ku j q | | ^al^atwv c nvgw| ãm n³/4 v
 rrr cpi » xgv²mgf²upgm ²u i { n³/4gvgm hqn| ^au^a j q | 0
 Ogtv c | dk vqu< i { n³/4pk Mgo^a n ku wfqw0 G | ku gt u
 lmg o xqp^a uc xqrv c nrgvkr qrkknwupcn0

ZKOV / c D^a m^a pqp0

Crki j qi { gn ãn dgp xqrv c vkr qrk | k i wgtkr c / j^a /
 dqt ã²u Mgo^a n o gi Gpxgt j c | cv²tygm U | cmjpkndg. n³/4
 xgvn| gw c o^aukm pci { u | cd^au ã V³/4³/n³/4 u^a i tc p² | xg
 o^at uqmenvtci knwucdd x²i pgo | gv^kx²tqp^vu0
 Gpxgt ²u Mgo^a n gddgp ku vx²ngp { gp t² u | v xgw0
 000 Dcm^ap / j^a dqt ã v³/4^vpgv kuo gtv< c Dcm^ap c |
 wqn» ³/4xgp ²xdgp gi { gdgv ugo vgw. o kpv hgmgr²utg
 u | gtxg | mgf gw ²u crt^apn²pv u | cdcf wv hgn c v³/4³/n³/4 ki c
 cn> r0 C | gnu r²p | ²u hgi { xgt / kplgnel>nev c | qtqu
 cf v0 C v³/4dk c | v³p o ci^a » n o gp0 C | ãqqpcp cr /
 mww ngtg | v²p { hglgf grgo u²i gm gt u³/4 vgm ²u eucm c |
 cmem cv x^at^vm j qi { c v³/4³/n³/4 n³/4pgm cnkm o²i o k /
 fki pci { vt ãvgvmgn tgp f gm | vgm c Dcm^ap / h²nu | k
 i gvsp. o gi cf l^am c ngi { grgo f³/4²u0 Go kw xqrv gf /
 fki ku. c j qn kw. j qn qw nk³/4 u^a o vcrp Dcm^ap /
 hgmgr²u0 C Dcm^ap / ^anc o qm gr²tn | gwpgm n³ w³m c |
 kf v. j qi { u | ³/4xgvn | gp gm c ngi i { ³/pi ãv hqn | vq
 gt vpgdd uk gm pu²i. c v³/4³/n³/4 gm p0 O^at t²i gp c
 ngxgi dgp n³i qw g | c pci { Dcm^ap / u | ³/4gw²i 0 Rgwt /
 pcm gppgm c euqpvucte ã d q | qpqu | go ³/4f³/4n .
 u | gtd nk^a n | pcm o ãv ²xk nupwcvp^a rqn | k n³ /
 vq | cv³uc ²u V³/4³/n³/4 u^a i hgr² vgw dca^a u^a i qu nk | g /
 rpv²ugk o kpvj c gn ugo j cpi | qwem xqrp0 Wi { n³ v
 u | km wi { cpeucm j² dxcn » xqrv X0 O qj co gf u | w³a p
 tgi²p { gu ²u j c | chku rtqr ci cpf cwc | ^auc U | cmjpkndg.
 Oqpcu | vtdc ²u © u | m ãddg c | kl ã³/4³/n³/4 n³/4m tgp f g | ²u² /
 dgp0 C Rt> l²vc u | cn³ n³ pem gi { u^a n³xcn co gn | gv
 dcm^apk cr>wxn> k c o cegf » plek wc | ^au crw ncr vcm

c| ul wcnqf»wn o²i pgo ngj gv²xul^a| cfqm »vc gr/ nra n^auj q|²u ul cdq^an^auj q| ul qnqw qtu^ai t²u| gngv o gi d²n^agpk O wu| vhc Mgo^an ku dgu hgr^adqtqf^au/ ucn n^avc gppgm c| kl^av^{3/4}n^{3/4}m^ancn ng| fgo²p{gl gw wcl^aupcm ul^aprcfkcu^ai^av²u p²gxgv²i gu²i²v⁰ V^{3/4} t^{3/4}qtul^ai c dcm^apk xgu²n^a n^a w^atc dgu ngi ku o gi/ t^a| m^afqw= gi {km nqto^ap{ x^anqvc c o^auknev⁰ O quv²rrgp Æ eukrei xcp go gmgf dgp< P c| ko r cuc. c| kl^av^{3/4}n^{3/4}m^afkm^aqt/lgr^an⁰ Xgrg ul go dgp dwnq^aw o gi c t²i k d^ank^ap{. O c j o w^a Ughngv r cuc. U wco dwn o gi/ o gpv lg⁰

C Dcm^apj^adqt^av n^{3/4}xgvrp nkr cwcpv» v| eu»xc. Pkn^apcm c o qvpgi t»k hlgfgrgo pgm xcno gt j cf Æ gpgv xqn⁰ C ul gtd/i^{3/4}dqri^at ul^{3/4}xgv²i²u dgcxcvq^au j kn»tk^alc qn{cp hkuu. j qi { c j^arcr qm d»n kuo gtl^an⁰ Mktm Mkrku| g. Mwo cpqx». x²i Æ N^ang Dwti cu| < c v^{3/4}n^{3/4}m j cf kf leu t²i vgo gv k i {qtu^am/ o^auqm c v^{3/4}n^{3/4}m j^adqt^axgu^av²u n^awl »rci hgnctv| cv/ j cvvcp nglv l²p⁰

! u o²i ku< V^{3/4}qtul^ai x²i gtgf o²p{dgp o clf/ pgo o kpf gpv o gi o gpv⁰ Gddgp n^av²i vgrgp Æ n Gp/ xgtpgm xcp pci {²tfgo g⁰ G| v Mgo^an ku grkuo gtvg n^au dd t»rc⁰ Okw^ap wi {cpku o^at c| gi²u| o qj co g/ f^ap Dcm^ap gro gpgm Æ n f²rtg. c v^{3/4}n^{3/4}m eucrcvqm r g f ki tgp f gl vgrgp Æ n gn^avcvcpwn^{3/4}pr^{3/4}v^{3/4}gm j c| c. c h x^atqu hgr^a= co knqt o^at Æ i {n^awl qw. j qi { Mqpvcpv^ar qn|. c U gpv X^atqu ku xku| cngt Æ n c dcm^apk ngtgu^av²p{ p²/ r gm ng|²tg. c ngrgvk eu^au^atu^ai v»pl^atc x^ai {»f» dcm^apk hlgf gm gm vknqu^am ck j kvgrp^{3/4}u| gqo nq/ vcn⁰ M^{3/4}dgr^ar v²m c pci {j cvcm cm d^{3/4}reugp wf x^ap. j qi { c hgrq^avq w V^{3/4}qtul^ai qn{cp nqpe. co gn{gp^av²rgvpcr ki o ctenqf p^apcm c| gwt»rc k qtu^ai qn⁰ O^at P cr »ngqp d^{3/4}reugp hgrkuo gtvg gl⁰ Kuo gtl^an c| v c v^{3/4} o^{3/4} o gi^amer^au^av. co gn{gv cmqt vgw. co knqt c tqo cpvknw. vknk eu^au^atw^an^amaj »p j^a Æ n j q| v^ank U grko v^{3/4}n^{3/4}m ul wn^apv x^atcvcpwn o gi i {knqn^an⁰ P c/ r »ngqp c| v hgrng gmqt c| gr^adg vgtlgul vgw v⁰ o cf^auk vgtxtg< š V^{3/4}qtul^ai hppp ctcf^auc Gwt»rc²tf gng⁰ G| v c| cnetcv^av c v^{3/4}n^{3/4}m h^{3/4}ftg²j gu U³pfqt e^atten ul go dgp ku o kpf x²i ki gtgf o²p{gugp n^ar xkugng⁰ G|

c jgn{gu hgruo gt²u xgl gygw x²i Ñn ku c p{wi cvk pci {/
j cvcm cm gi {Ñvgu nt¹ b k j^a dqt Ñ^a tc ku ô c v^{3/4}3/4
n^{3/4}mx² f gm² dgp ô c| qtqu| qmgmgp0

C pci {j cvcm cm dgxcvnu|^a u^a tc o quv ku ô
o kp^v 3: 76ô 77/dgp c| qtqu| /v^{3/4}3/4 m j^a dqt Ñ cmcm^a xc n
ô co knqt c i { | gm gup gn tgp{qo w» mgpu² i o^a t
l>hqt o^a p Mqpuvcpk^a rqn{ ner wk gn w^a nqw. ô o gi /
kpf wcm c d² ng^v ti {c¹ uqn0 G| crw c j cf ul {p^v tgp
hgi {xgtu| Ñpgv^a mvdg0

Ft^a o ck kpvtg o gl | q f^{3/4}pk gn gl gndgp c| k i c n/
o cu per qndcp U| vco dwdcp c j gn| | gygw0

3; 35 ngi gnu per lckdcp² tngl gw j c| c Gpxgt Vtk/
r qku| d>n0 C pci {xgl² t. Mlco kn rcuc. ²rrgp c tgpfn//
xArk^a mco vcp^a euqv j {kvc i {qtucp^{3/4} u| g. jqi { c hgn/
cl^a pqw d² n^v. co gn{ Ftkp^a rqn{ v. c o^a uqf km ngi pc/
i {qdd v^{3/4}3/4 m x^a tquv tedqrlc gn grhqi cf l^a n0 Gpxgt
gttg per qm crw o gi ul gtxgl k p² j^a p{u|^a | gn|^a pv hkc/
vrgo dgt d n ô xqrv hqttef cm k vku| vgnl n ô c o ci c
o gi pgo cmw» j^a dqt Ñ r^a tk i^a tf^a l^a v0 Gpxgt ugo /
o kv n ugo l² n0 Cnk o^a t c šx^{3/4}3/4 u| w^v pō/v ku o gi /
dwmcw. c| rg wf ul^a o qpk c| cdf wj co k k dg^a m//
qv w^a i qmex^a f qrv Ñ nqto^a pp{cnku0

.. v perrcn Gpxgt Mqpuvcpk^a rqn{ dc² tngl² ug
w^v p | clrk m c j {figu lcpw^v t j wul qpj cto cf knk r weeu0 Gp/
xgt n² ul^a | nqo k² vku| wgn o gi ul^a mlc c pci {xgl² t/
u² i ² r Ñng² v0 P c| lo rcuc dgn Ñi {o kku| vgt. c pci {
f km^v vt. nk^{3/4} p c vcp^a eum| » vgtgo d n c j ktvrgp ng/
tgnf gw | cltc0 Eki ctgwc c ng|² dgp0 N^a dc Gpxgt v.
xqrv det^a v^a v0 P go ² tk o kv cnet0 Hgr² lg o gi { . gl gm/
krgnc v^{3/4} v² pgrm kj kgruu² i ul cxcmenk

ô P q. o k c| i {gtgnnA O kv | clqpi vqnA P go
i qpf qn^a v m j qi { | cxct l^a v mc v² ti {c¹ uqnevA

Gddgp c rgtedgp v^{3/4} dld tgxqrkgr² k² u f^{3/4} f Ñn gr0
P c| lo ctec j ktvrgp gr^a nq| km² u c ul {k² j gl ner 0 Rkl/
ncpvc{kp² o c eugpf w^v p hgrp {3/4 0

ô Mw{^a n# Gncn¹ ncn000

O clf { hqn{ vlc. o quvo^a t uqmmenj cmøddep<

ô O gi^{3/4} ngn000

P c| lo j cpi p² m Ñn qo nqw^{3/4} u| g0 Rgtegm crw
nku| gpxgf gw0

Gpxgt hgnwi tkm c| gn ul qdc gi { km ul² nř tg0 Mř v
ngl² dgp tğxqrxgt0 Mř^a nql km j qi { o lpf gpnkv rgn . cnk
gmgpnl pko gt00

00 C| ^amco euřp{ ²u c i { kmqu^ai ukngt Ān0 C
nqto ^ap{ pcm gpi gf plg ngn< c dtwo ctkluc c| qpdcp l»
vcmkmw0 O c i c o²i pgo p{ Ān c h j cvcrqo w³p0 P go
Gpxgt. j cpgo c t²i k d^a n^a p{. c o^a uqf km ul^a o Ā f km³
v³ vqlgr³4w c hgnul cdcf w» ²u pgo t²i o gi dwmcvqw
O c j o wf Ughngv ruc rgu| c pci { xgl²t² u nqto ^ap{ /
gp³4n0 C hw³t pgo o gi { c d² ngr qpvm cñ³ u^a xcn
Nqpf qdc< c Dcmř p gmgpk jcteqv. c / qppcn vqx^a dd
hř³ v^a n0 Gpxgt pgm šc pci { f kngw³ pupcn³ ²u šul g/
tgpeuhkpgn³. l» o gi² t|² ugk xcppcm ²u o²i lqdd
nř o lgrgp² ugk c| gmgpu²i v³ dqt^a d» n0 C dcmř pkm nř³ v
o quv. j qi { c dk vqu | u^a n^a p{ tc ngt Ānpg c uqt. gi { g/
pgvrgpu²i Ākhgnc hgl² v0

C Dcmř p / lř nu| ki gvp pgo ul qn^a vcp fqm i gl 0
Mř⁴ dgp c| qpdcp V³4³ nqtul^a id» n Ā x² tgu rqrkkk³ k
o gt² p{ rgv ul gp|^a ek³ u j³ v xku| k ul² v c v³ x³ t»< gl gm
c| ²xgm ^a n^a dcp vrg xcppcm c v³4³ m v³4² pgrgo /
pgm ul kvg lcpku^a tnqtcdgrk ^a mco euřp{ / uqtc| cvkxcn
O wul vchc Mgo ^a n pgo xgu| t² ul v dgpp Ān0 eucm p² | k
gi { gn tg= c j qn Gpxgt c h ul gt| . qw v³ xqn vctlc o c /
i^a v0 C o^a uqf km rweeu cm^a n^a xcn pci { xcf c| ^a r f q /
| cv< o c i c c hppgp tci { qi » eukrci < O c j o wf Ugh
ngv. c pci { xgl²t. c V³4³ nqtul^a i pcm kf tgpfdgp o^a /
uqf kmf km³ vqlgr³4nlg0

O quv fgt Ān v eucm nk j qi { Gpxgt pgm l» ul ko cv
xqnx. co knqt Ugxngv vqnc c| gnu xqpcnc h ul g/
tgr n pgm³ po ci c j gn gw0

C nqpl gtxcv³ xqm v³ dqt c. l Āpkwu v³ gp³4³4 knř p.
dqul Ād» n P c| ko r cu^a 2 tv ²u c| ^a mco euřp{² tv. o gi /
³4gk O c j o wf Ugxngv0 G| gp c hqt» l Āpkwk per qp
gi { ugdgugp. ncp{ cti » ucp ul^a i wf » cwqo qdkn tqj cp
ul go dg c pci { xgl²t² u nř³ tgv nqeukckxcn U| wco dwn
we^a kp0 C| ³4ul ggum Āx m Ānpgm dgppg0 O knqt c nř v
nqeuk nř³ gn² t gi { o^a uj q|. c| ³4ul ggum Āx m hgi { xg /
tgknd n i { qtuv Ā gv p{ kpcm c ul go dgl³4 cw» ntc0
Ugxngv j qncp jcp{ cvkm j^a tc c d t Āř ugp0 C o g /
t² p{ n ngv gl Āvcn pgo j ci { l^a m hwpk o kv P c| ko

i { kmquck< c| qppen grhqi l^a m² u j cf k^{3/4}x²p{u² m gr²
^a n^{1/2}l^a n⁰

X0 Oqj co gf ul wn²p gi { km ngi ngf xgugdd tqnq/
 pc. wqncj Āi^a pcm O Āpk² ul wn²p^a pcm l²tlg⁰ F^a/
 p²f O gj o gf U crkj r cuc ku c| ^{3/4}u| ggum² m n^{3/4}^{3/4}w
 xqn⁰ X0 Oqj co gf vgw²t²pgm c| grj cnv Mgo crgf/
 flp j gtegi pgm n¹p{c xqrv O Āpk² ul wn²pc⁰ C ul gtgp/
 eu²v²gp hxcv cuu| qp{. cnk crki j cv²xg²nv dqrqi j^a/
 | cu^ai dcp c| w^axcn ngi { grgo²tv tko^apnqf km pgn⁰
 \ qnqi xc. ^{3/4}u| gv^{3/4}v²gp eu»nqni cvlc ul wn²p/pci { d^av{lc
 ng²v⁰ Cpp{k d p^{3/4} o gpgm² d²pv²gp² Ān ô o l²tv pg
 o ctefj cvpc²ngvdgp c| wtc. cnkpgm gi { gv²gp d pg.
 j qi { pci { qp ul gtgw j c|^al^av⁰ Pci { ²tfgo gk xqncm
 c j cf ugtgi hlgul v²u²dgp O Āpk² l²tl²pgn⁰

Tgu^af pci { d^aeuk ô X0 Oqj co gf ô ul ^{1/2}xg x²t/
 | km c ul²r. hxcv v²go v²u²tv. cnk²xcrcj c c v²tf²p
 tlp¹cvq⁰ U wn²p o²i pgo vgw. pgo ku vgu| k v^{3/4}ld².
 co kv xgrg v²v²gw c ul^apcmqo² u c| kti cm cu^ai < ng/
 v²tf²gnv ucl^av dgn²Āi { o kpkul v²tg. O gj go gf Vcxcv r cuc.
 c| Āl šekkn xcugo dgtō gn w. Āi { n^{3/4}p{^{3/4}i^{3/4}w c| gr^{1/2}n²
 v²tv⁰ O kpf gp j l²dc< cr¹ ngmgw ^{1/2}pk c j cr¹nqu ^{1/2}ng/
 v²v⁰

Fco cf O gj o gf U crkj r cuc. c rghqnu| qw eu^a/
 ul^atk v²dtpqm hxcv²u| vq w j qnwgug 3; 35 cwi wu| wu
 35/^ap j clpcndep qw j ko d^an| qw c v^{3/4}ldk gr^{1/2}nv n^{3/4}/
 ul go r²tg nkgw j qnwgug n^{3/4}^{3/4}w. wqn»pcm c dk»l^ap
 h²Āi i muqt^adcp⁰

! u X0 Oqj co gf. c ngi lqdd ul ^{1/2}x wtcmqf »m gi { k/
 ng. cnk eum vt»ppp Ānv xcrcj c. gnu| qtwn» ul ^{1/2}xxgn j cm/
 lc. j qi { O Āpk² j Āi^a pcm wtc. v²ngv²g. c| pgx²/
 xgnc| cln²p j civo gi 0

Rgf ki pgo eum c ul wn²p. j cpgo m²Āj cvcm cm
 ku kpv²xgp²ncm U crkj r cuc²tfgn²dgp⁰ C l²cepk
 nqto^ap{ pgx²dgp Rlej qp m²ĀĀi { o kpkul v²g u²Āi^{3/4}{/
 |^{3/4}w c nqpuvcp²l^arqn{k l²cepk Āi { xlk pgm O qp/
 ukwt Dqr r gpgm U crkj r cuc²tfgn²dgp⁰ C| gnu u²Ā/
 i^{3/4}{ ^{1/2}l { ul »nv<

..! rr o quv ncrqw j ^{1/2}gm ul gtlpv U crkj r cu^av. c
 wplu| k J clt²gf flp r cuc h²v grhqi v²m² u j cr¹ntc ^{1/2}n²/
 v²n⁰ G| c j ^{1/2} c l²cepk Vwplu| dep. cj qn U crkj r cuc

pci { vgnkp²n{pgm 3/4xgpf. pci { k i cm cv qnq|qw0
 C ltcpekc nqto^ap{ o gi xcp i{ | fxg ctt>n j qi { c
 x²fgrgo tg u|qtwnpcm grf²r²ug Vwplu|dcp nqo qn{
 hqttqpi^auqmtc xg|gypg0 U Ām²i²v n²lc. j qi { U c/
 nwk r cuc²tfgr²dgp kpvgtxgpk^arlqp0 Dgu²rlgp c|qp/
 pcn c pci {xg|²ttgn²u n²k^aplc p{qo cv²nqucp. j qi {
 U crkj r cu^av u|cdcf qpdqeu^au^am²u vgrlgu dk|vpu^ai/
 dcp Vwplu|dc v²tj guugp xkuu|cō0

C v²4³m nqto^ap{ pgx²dgp F|ugo^an r cuc. cnk cm
 nqt Mppucpvp^arqn{ ncvpck rctceupqne²u ¶i { c
 v²p{ngi gu nctj cvnqo i{cnqt>lc. wfxtkucp ctc
 n²tv²c ltcpekc Āi {xkx v<uĀi 3/4p{3/4|g o gi i c|f^al^a/
 pcm j qi { gl c|kn²v mrgp dgxcvq|^au xgu²n{gl/
 vgv²c v²4³m nqto^ap{pcm c ltcpekc n²4 v²tucu^ai j q|
 xcn> l> xku|qp{^av0

C x^arcu| R^atk|ud>n xcu^atper²llgn²tng|gw0 C|
 Āi {xkx tqj cpv xgrg F|ugo^aij q|0 C|^anv dgppg<
 o kpf gp^atqp cncf^an{q||c o gi c| Āi {xkx U crkj nk/
 x²i g|vg²u²vô šngtĀi³p d^ato kn{gp nqen^a|cvdc#ō

F|ugo^an o ci c xcnlc go r²nk cvckdcp. j qi { o kv
 j c|wfqwcmqt²llgnc| Āi {xkx pgn0

ô M²u o^at0 C| ¶²rgv x²i tgj clv^au^av o quv o^at
 pgo ngj gvxlku|ceulp^arpkk00

Rgf ki U crkj r cuc eucmtgi i gnj civo gi 0

O ci c Fco cf O gi o gf U crkj r cuc pgo l^avu|qw
 qn{cp pci { u|gtgr gv c| 3/4u|ggumAx²udgp. j qi {²rgv²/
 pgm xci { j c^an²pcm f³pv lgrgpv u²i g ngj vgw xqpc0
 Ngi pci {qdd d pg c| c j kdc xqnv j qi { tqul nqt mc/
 r qw dgrg c X²i|gv hgnct>|j cvcvcpwn fĀd³4i ng/
 t²mlg²u j qi { pci {Āt xqn0 P cr>>rgqp ku nkx²i g|v gw
 Gpi j kgp/Dqwdqp j gtegi gv0 C u|wn^apqm uqmu|qt xqn/
 vcm ki c|u^ai vncpqn= c p²r nqto^ap{c cpp^an ki c|u^a/
 i qucdd0 G|v ngn²gw j cpi uĀn{q|pk²u g|²tv ngn²gw²rg/
 v²xgn h²gypk O Āpk² u|wn^apc hkvcn l²tl²pgm c| wcn/
 nqf> n²4 grk tqnq^apcm Fco cf O gi o gf U crkj r c/
 u^apcn0 C| klĀ³4³m nqo k² xcn>u^ai qu^amco xqnv c|
^amco dcp< c| Gpxgt/F|ugo^an Vcncv vkhqkwo qn{cp
 3/4n²pp{gn wcmqf qw c| qtu^ai dcp. o kv xcrj c c
 x³4³4u|wn^ap0

G²tv wi {cp n¹t xqrv grucrp k Cdfwn J co kf qv
ô i qpf qnc lqi i cnO wu| vhc Mgo^an tpci {0

Ⓜ X^allqp. co knqt pgo ku gi²u| gp v¹ 2x o Ànc
Vercv rcu^apem c dwnq^w. go ki t^anv dgn¹ {o kpkul vgt/
pgm Dgtrk^p gi {kn ngtw^atqu^adcp gi { kuo gtgvnp h^c/
vrgo dgt j^awat»n c x^an¹tc vgl k c ngl²v²u t^gxq^rkg^tv
vctv c| ctec gr². ô x^allqp pgo t²o r^wg hgn gddgp c
o kpf gp t²i k go r¹ngv xku| ck²| r kncpvdcp Vercv
dcp. jqi { gi {u| gt t²i gp. o²i l¹p{nqt^adcp. c Fqm c
Dci eugdcp. gi { pgj gl gp o q| i ». h²g²tu| cm¹mcu. xgug/
dclqu ¾gi À v²tf grv ng gi { j cvcm cu dgn¹ {o kpkul vgt
gn w c u¹r rgf u u| p{gi gp²u ¾u| gv^w ngl gmgn n¹t/
vg. n¹gi {gm gl| gp o gi gi { d p²v d^ap». h^cvcn j^a| cu/
go dgt² r²gp^m j qi { c| v o qpf j cu^c o clf c| gn /
u| qd^adcp. gi { i ¾eu³ndgp hgnx h^cvcruu| qp{pcm
nk x²f gm gl Àn j¹xc ki c| k grj cnv crlc jgn{gw< š c
l¹tlgf pgo jcn o gi ðⓂ X^allqp go r¹ngl gw^g c| ko /
o^at o ci c ku h²g²tj cl¹x^a r^w go ki t^apu. jqi { cmqt.
cddcp c ft^aock rgtedgp n¹r gu xqrv pgo /gv o qp/
fcpkA

C x²r^wgp xci { c v¹4v²pgm k qm| gt u²i l³w c
v¹4³n¹m ugi v¹u²i²tg c Dcm¹p/j^adqtA ct^ap{rci ukng/
tgu dghgl²u²dgpA Pgo wf pk⁰ V²p{ c|. jqi { c| gn/
r²pu²i gu nk^an{qm ¾u| gxgu| vgn⁰ O^atku qu| v| pk cnet/
v¹m r¹gf ki c v¹4³m eucm vgl j crq^w xqn⁰ Co knqt
3; 35 l¹ku^adcp c| v¹p o²i ku eucm o gi n¹4km c j qu| /
u| À j^adqtÀv dghgl¹ r¹pf qpk d²n¹v. c u| gtd²u i ¾
t³4 pgnk^ao cf Dwi^atk^apcm jqi { uqncm^w | u^am
o^ap{t²u²v gr¹gi {g v r⁰Tqo^apk ku o quv o^at dgg
cnet n¹rcuqⁿf pk c l¹n¹ngt¹v x^ancm¹u^audc ô o^at
t²i hgp x^ai {qw Fqdtw¹| u^atc ô o q| i »u¹ C dqi^at
pgo | gv n¹u²i dggugw¹ p^am gngpv c x²tgu. o kpf gp qn/
f cit»n l³x v¹ux²tp{qo^aupcn⁰ C v¹4³m gttg²u| dg/
ncr. c n¹p^am¹ » r¹gv u²i gv n¹ku| p^anc. u¹ti ugp
jgnko l¹gi {²u xku| chqi n¹lc c| gngp^an¹ut^c n¹r vngp
dqi^atqm»n Ftk^arqn⁰ C Ftk^arqn⁰dcp jci {qw lg/
r²pv¹mngp dqi^at jgn{ tu²i j ukugp gngp^am ô r¹/
i^a| qn^am n¹g⁰ Gpxgt crl¹tgf gu. c v¹4³m eucrvqm
2¹fp. i { |grgo kvcup xqpwn dg c Octlec/o gpvk uk

x^atqudc0 Gpxgt c šFtlp^arqn(xku| chqi rēlcō e|p gv nērlc. Lxuu| wh Kgf fkp jgtegi. c| À v»p^{3/4}n^{3/4}u rg/ fki. cnkd n X0 Oqj co gf. o kpv c v»p n^{3/4}xgvēp x^a/ tqo^ap{qu^ad»n Àtc eu^au^atk i^atf crctcpeupqnv euk/ p^anv²u cnk gffki qwj qp c| |cn u| »tcnq| qw. jqi { c h x^atqudep. cpi qn o kpv³tc. jcxqpnkp v »tk^auk rqrkk/ nēk xceut^anēv²u mwdgu²n| gngv cfqw. pgo uqn^atc gnwc| jcvkm c hgm^adqi »|qw o^auqf km h x^atqudc0 Hgn/ cfvc. jqi { Ftlp^arqn(dcp c rēnu^ai j»fqrē³v c u| w^ap p²gx²dgp^axgi {g²u c Dcm^ap/d²n³v x²i tg/ jcluc0 Ogtv V^{3/4}n^{3/4}tu^ai l»n^atv x²i gtgfo²p{dgp c fghpk^ax Dcm^ap/d²n³xgn o kpf^{3/4}u| g u^a| pgi {xgpg| gt p²i { |gvn^aqo²vtp{ k gvt»rck vgt^agv²t n ngnēw ng/ o qpf cplc0 Gu o²i gi { nko qpf jcvēp gn p{g ku xqiv c n^apf qpk d²n³pgm c v^{3/4}n^{3/4}j cfugtgi. n^{3/4}v^am O wu| / vhc Mgo^an tpci { ku. dgppo ctf jcvqw d²n³u nē/ u^atp{^ak dcp0

O wu| vhc Mgo^an ku t²u| xgw c Dcm^ap/j^adqtÀ/ dcp0

U| gtgr g pgo xqiv xcrco k v^{3/4}v²pgm k ô c| ^avc/ i qu xg|²tnetk vku| v ci {cv²u vgvēv l^atcu| v» o w^an^a/ l^av x²i g| v^ac| qr gt^an» j cfugtgi p²n⁰ Ftlp^arqn(dgx²/ v^ar²p²n ku qw xqiv ô g| w^ap p²gxg| v²m nk crg| tgf gupgn⁰ C ftlp^arqn(k f^{3/4}pv i { |gngō w^ap vi {cplu o kpf gpnk gn r^argw cnk p²o kn³r ku t²u| xgw c| gugo²p{gm ngf xg| crēn^av^au^adcp0

Mgo^an c d²ngn^{3/4}u w^ap hgm^{3/4}n^{3/4}km²f gup{lc// xcn c h x^atqudc0 C jcto kpej^atqo²xgu xg|²tnetk cn/ g| tgf gupgm cnk gi {tg v^{3/4}ddgv cnetv c| ²ngw n o quv o^at c h x^atqudep xcp c jgn{g. jku| gp kw n^angv c r q/ rkknēk²ngv n^{3/4}r qpvlc0 K^av xepem c o kplu v²tkwo qm c rctico gp⁰ Crki r^at²xg. jqi { nēvpckun^arek p^{3/4}xgp/ f²m³pv kf gngt^anō²u o c o^at c eu^au^atk xg|²tnetk crg| tgf gu f^au| gu. ctep{qu gi {gptw^al^adcp l^at/ngn c x^atqudep= klgfv wf xctku^ai i cn witepem pgnk clw^v p{ kpk c nēvpck jkxcv^aqm rqt³uck cnku| vlgk⁰ O kpf gp h^au/hctci^au. o kpf gp gngpu²i gung²u gmgp²tg u|²r. šj kxcv^aquō wcv vgw o gi 0 Fg O wu| vhc Mgo^an l»n wf lc< pgo c šj kxcv^aquō Àv c r^ap{gi gu pci {tc/

j kxcvqw 2ngv^a n^a l^a dcp0 C/ ki c/k ô c| eucm o quv
hqi l³/ppk0

C hxcvn cng|tgf gu xgv² n^a v^a tuc. Gpxgt. uqmen
v³/dd m^anu ngi {gv j^a qw c ngi w»ddk 2xgm gugo 2/
p{gkd r0 O quv. co knqt pgo uqnf^atc. Nko^a p xqp Ucp/
fgtu rqtqu| v^a dqtqpm xg|gv²uk² crcw. p²o gv ncvpck
dk|qv^ai 2tng| km V³/4³/nqtu^ai dc. m^an^a/p³/4³gpp pci {
gmgpu|gpxgv 2tg| Mgo^a n c| cnetpqm/xgv² n^a v^a tu< Gp/
xgt gmgp0 P {^ancp o gi ku o qpf lc Mgo^a n vku v^a tuck/
pcm< pgo j gn{gurk j qi { c p²o gvgm ng| f km o ci wnev.
c Dgtrkpdgp 2nv Gpxgt v^a o qi cv^a u^a xcn dgh² u| ngrpk V³/
t³/nqtu^ai dc0

3; 36 o^a tekwa 3⁴/4³ kn^a p Gpxgt ô gmnqt o^a t rcuc
2u ngi {gro gu Æ. ô c| gi {nqt k hqtcfcm^a t. hrgu²/
i Æn xgu| k P kucpvcudcp. c Fqm c/Dci eug eu^a u^a tk rc/
nvc o gmgw. c nteukp{. i 3⁴/4³ . 2r² pm dgeux^a i {»
Go kpgj P cf| uk u| wv^a p^a v. c u| wv^a p gi {km wpqncj Æ
i^a v0 X0 Oqj co gf pgm w| {cpku v³/dd h^a x² tg xqiv< c|
gi {kmpgm c p² j^a p{ 2xg u| kv² p grj civ U| wrglo cp
j gtegi pgm c| ^atx^a lc xqiv Go kpgj 0 C u| wv^a p gi { o^a /
ukm grj civ h^a x² t² pgm r^a p{c xqiv O Æpk² u| wv^a pc. U| c/
nvk rcuc c nkx² i| gw 3⁴/4³ ggum^a x 3⁴ xgi {g0 P qu. gl
c hxcvn 3⁴ xgi { u| kv² p o gi j^a x^a uv ner qw c| Gpxgt/
Q| o^a p p^a u| tc0 O Æpk² u| wv^a pc. c nkx² i| gw i gpgt^a /
rku hrgu² i g c| qpdc pgo o gpv gn h² tlg i {km^a pcm
gum^a x l² tg00

C| Gpxgt/r^a t j rco ct dgtgpf g| ngf kn0 Gpxgt c
l³/x euknci c. ô vcr^a p Æ f kpcu| v^a cnet crer^a cpk^a
ô uwwqi l^a m o kpf gphgr⁰ C x^a tqup n^a k Æn Ukurk hgr^a
^a nv Æqppcp 2r^a g^a gw r crv^a lwm cj qn c| gn euctpqndcp
Go kpgj P cf| uk j gtegi p pgm c| gum^a x k u| gtvt^a u/
p^a n j cu| p^a nv »t^a uk ctep{qu v»pu| 2ng ngr k o gi c x^a /
tcnq| » gwt»r ckr^a vqi cv»v0

Gpxgt. c eu^a u^a tk tqm^a p gn w o quv o^a t hgn/hgn
n^a f rkm c P ci { Ngj gv u² i < vcr^a p gi {u| gt r^a r o clf
c| gnucv{wv Q| o^a p/f kpcu| v^a c j gn² tg0 Gi {nqt v/
r^a p c| wpqnf k Ærgm o clf Oqj co gf Hxkj v»pl^a p.
ô vcr^a p Æcdd j² w^a | gu| vgpf gli c| Gpxgt/f kpcu| v^a c
hqi o clf c| Ctep{r ctv hrgw w tcm^a qf pk^a00 Mk wf lc0

C j k^a ^a m qm c| qpdc pgo x^a ncm dg0 Gpxgt 2 r/

r gp pci {tcx^ai {^au^apcm gugw n²u dd ^arfq|cww⁰ Vtc/
i knwcddep. o kp v . crki hglgl v g dg ²rgv² v ³/₄3/4n^a n/
rco l²thk⁰

O wu|vchc Mgo^an c tgerkuc. pgo k²gp e²mqn²tv
m²l f⁰ C uqtu o clf t³klf gugp o gi o wcvlc. j qi { c
n²v xgv²n{^atu= Gpxgt ²u Mgo^an i qpf qrcvk n²4 ²Ān o g/
n{gm xqncm n²g f xgugddgn= c| .. t³4m²xcm^ai u| p²g
gn wA⁰

ZKOC xk² i j^a dqt⁰Ā⁰

3; 36 pqxgo dgt v² gpngwgf kn²p V³/₄3/4nqtu^ai
P²o gvtu^ai qrf c²p o gi Ā gpvg c j^adqt⁰Āv Cpi r²k²/
pcm Hcpekcqtu^ai pcm ²u Qtqu^aqtu^ai pcm⁰ C j cf/
Ā gpgvdgp Gpxgtpgm c j k v g n p c| ²rtg ³/₄v xleg/i g/
pgtcrku^a ko wu| pcm ²u j cf Āi {o k²ku^a vgtpgm f³/₄p v u| g/
tgr g xqn⁰

M²puvcp^ar qn{v c| gn| per qndep o^at ku euqf^a/
rcvqu k²i cm⁰ u^amqwc o gi 0 C| go dgtgm^ancpf» hg/
u| Ām²i dgp ²ngm co gn{ pert»n²per tc hqn²l}»f qw⁰
J p²gm ngtkpi vgm c x^atqudep cpi qn fgo ctut»n qtqu
wnko^a wo t»n vkn²u p²o gvo cp xgtgnt r⁰

C u| ki qt⁰Ācp o gi egp| Ā^a| qw Āu^ai qm gm²p²tg ku
o kpf gpv. u v o²i ³/₄ddgv ku wfqw c o knk²u x^atqu.
p²pk pgo xqrv u| cdcf o²i c| cpi qn pci {n²kgv hgp{g/
i gv n²qi cv²u^at»n c pci {xg|²tu²i gp ugo. fg c vku/
vnet. j kxcvcpqnk net. gi {u| gt go dgtgm o kpf gpnk
wfqw t»rc⁰ C| cpi qn n²kgv n²l²t l²dcukv. c nce/
n²u qtf qp^ape tpci {qv xku^a cv²tv w²p dk qp{^atc
dgj p²vc c h p³/₄ng. c dko dcuk⁰ C| g| tgf gu Āt u t
u| kxcth²Āv o gm²w. ngm fku nt²ek²v o p²g r²kg. nku gf/
vg cncp^au^ad»n j qi { c n²kgv c| gn dd gi {gpgugp c
pci {xg|²tj g| n²l²tv⁰ O gi wfvc c| v ku. j qi { c n²/
xgv i qpf vgtj gnv xqrv. n²o qn{ ²u gi { u| »v ugo u| »n
n²l²t l²j g| c hqn{qu»p⁰ Kc w²unc pgo xqrv p^arc⁰ C| /
³/₄p n²4 Ārdgn²Ān v²l rgtaki xqrv dgpp c pci {xg|²tp²n⁰
C pci {xg|²t hgp²i g ô gi { u| Āngv² gi {kr vqo k
jgtegi ô pgo n²l²tv² nk c| gn u| qd^ad»n c n²kgv
²u o ci c w²pc o kpf l^atv c j cf Āi {o k²ku^a vgtj g|

o gpv ^aŵ Wī {cpg| v o gi wf vc c lĀ dcuk ngi lqdd dc/
 t^alc. c vĀ²t^{3/4} uncr k^ap{ ku0 | ur gf ki c ngh c| ²v
 ng| ²u w^apk v²vgr r kj gp ul Āpgwdgp0 C lĀdcuk wi {cp/
 ku dk cm cu e²ŋ^auv vgw. o kŋ gp hqpvqu ul go ²n{k²i
 o gn² xqrv f²rgn w dgqu| xc0 —i {ŋ^aul km šn²ul Ān xc/
 rco kō0 C nku kpcu. cnk c hngv²v xkwg dg c t²| v^are^ap.
²rrgp c| wqn» ul »vci qnev hqi vc gr0 C| v^ap p²j^ap{
 rgte o Ānc wf vc o^at c nqp{j c. j qi { c o ci cu wcm/
 p^an n²ul Ān xcrc k0 W| uqppc gn w o^at c h ul gtgu ku
 wf vc. c| v^ap c o²ul^atqu. o clf ul qo ul²flc. c| Āum²/
 ul ŋv. guv²tg gppgm c u>iqtu^ai c ku. cj qn c tqnupqm
^{3/4}ul gl^{3/4}vgm gi { nku vgtghg²tg0 O^aupcr tgi i gn c|
 Ctep{ul ctx gi²ul f²rk qrf cr wfqw xcrc k k i cm cu
 gugo ²p{t r0 Rgtul g c fqni cmqt^atc o^at o gi p w<
 V^{3/4}3/4ntul^ai qvj cf Ā gpgwgnhgp{ gi gv²mo gi 00

C x²ul j ŋi v²ddk grpf w^auk rqpvc v^ap o²i
 kŋ gp gn ngn ugo xqrv0

V^ap c| qpdcuk»n kpf wv nk c j ŋi. cnk c| cpi qn
 n²4xgvv ugi ŋgwg nk c| cw»d»n ²u c rqt^al^ap^am» ng/
 i²p{u²i v n co gn{ ul qn^arcqv vglguŋgw0 F²nw^ap c
 ncu^atp{^adcp. c| gi {km v²4^{3/4}m dcnc o gi uĀ j cwc
 c| v n²qi cv» i^{3/4}3/4 dca^avp l²pgm gl o gi ulgvv
 qvj qp vx^addcfpk c j cmqvncv0 V^{3/4}3/4ntul^ai dcp Āi {
 h vpgm j qi { p{kqw t²|ugr gp{ nūgp k| » hcu| gpgv
 vcvpcm c ul qd^adcp0 Gppgm c e²j pgm c o j gn{ gk
 v^ap c| qpdcuk rēn^auc o gngw xqncm ô kv ku ul^al/
 t»n ul^altc l^atv c j ŋi. r^atj w| co qucp c ncvp^am ²tv/
 uĀ²ugkgr0 kppgp. c| Āum²ul ŋv n v n c xgx nki ul k/
 x^ati qw c pci { Āu^ai. Rgtc. Qtvem l c Rtkpnkr q ul k/
 i gv. I crvc. ©ul mĀct. Vqr/J cpg. fg o²i c Dqu| r q/
 twul nkqtnqm^au^ap^an ²r Ārv two grk/j ku| ct/k |^at»gt f
 ngi²p{u²i g ku o quv o^at wf vc. j qi { c rxlpc. Āi {/
 ŋ^aul km o²i ku grpf w0 O^at hki {gn²m ku v^ap vkqm
 dcp. o guul gn^a»xcn pgo v ppgm^ag hgn c Hngv^av/vp/
 i gtgp c| qtqu| hqvc ngungp{ hĀuul crci lck c o guul g/
 u²i dgp# O leuqf c ul gp|^aek». o leuqf c nettigt xqpc.
 j c J cuul^ap Cirk n²4 vĀ²t xgpp² ²ul tg ngi gn ul ^{3/4} c
 hĀv^{3/4} ²u tqj c ppc lgrgp²uv vppp# P crkrctcpeude ng/
 tĀpg c pgxg. o gi flcu²tp²m= v^ap gn ku r^ar vgv²m
 n^ar n^att^a0 G| rgfki eucm hgr^at gi { j^adqtĀ nk^{3/4}2 u²/
 xgr#

C nrqmpcm c| qpdcp c| wqn» pcrki ugo o kv
 ugo xqrv ul cdfc j q| plqm c V^{3/4}3/4ntu^ai qv ²tkpv xk/
 rⁱr qrk^knek gugo ²p{gm nnggo gwgp t²u| gk r0 Nu ²rr
 gl xqrv c j kdc0 C x^atquk n^{3/4}3/4pu²i ô j ku| gp U| wco /
 dwn xqrv c o ²t^vnef» ô u| gk o qi t^ah u| gt gp. c| qppen
 tgc^anv o kpf gp kf gi tgl f[~]utg0 [~]i { o ²i qw ku x²u| v
 uglvgwm cj qn vcr^p pgo ku xqrv x²u| 0 C v^{3/4}3/4m rⁿqu/
 u^ai u| kora^klc c j^adqtAu j cvcm cm n^{3/4}3/4w m[~]3/4pdgp
 ku ki gp o gi qu| mw0 C| k^hA^{3/4}3/4m p²o gvdct^au^ai^a/
 xcn u| go dgp gt u »/q| o^ap gngp²m^amw0 J q| |^alwm
 u| ¶qwcm c| qm c hcvcm ku. cnkm c vcflekq^aru cp/
 vpdct^au^ai qvcnet^vm^ar qpk0

Oci^apcm c nyo k²pcm go dgtgk n^{3/4}3/4w ku uqm
 hcepekcdct^av cnefv= j ku| gp l>t²u| ãm R^atk udcp.
 Ux^aledcp ²nv. c| cdf wj co kf k go ki t^aek dcp0 C P { w
 i cvu^ao wntc gi { gvlngpvgw hcepekqtu^ai i cr0

Xercok j^adqtAu j cpi wcv pgo wcmufqw ugo
 c| gi { km ugo c o^aukm qf cmq0 Vcr^p ²rrgp c| ²tv
 ugo. o gtv V^{3/4}3/4ntu^ai pcm c| w>ddk ²xgndgp cpp{k
 x²tgu j^adqtAc xqm0 J kel gp p²i { ²x »c l>hqt o^ap
 gi { hqn^v dcp hgi { xgtdgp^amv c| q| o^ap p²r0 3; 32/dgp
 Cnd^aplc n^a| cfv hgn0 G| v n^{3/4}kgwg c j gi { k ft[~]qm hgn/
 ngn^ug= 3; 33/dgp Igo gp ²u U| ¶kc n^a| cfv hgn²u c X^{3/4}
 t^{3/4}v^gpi gt o gn²n²p nngmw j cteqpk0 M^{3/4}xgvgp ãn
 w³pc l^{3/4}v c| Qrcu| qtu^ai i cn Vtr qru²tv x[¶]kw j^a/
 dqtA0 3; 34/dgp v^{3/4}v nk c Dcm^p j^adqtA ^{3/4}u| gu o gn/
 r²n^ai c|^auckcr0 G| v c j^adqtAv r g f ki eucm 3; 35 u²p
 hgl| vg dg c mpf qpk d²ng0 Gu o quv o gi kv j^adqtA#
 O²i j q| |^a dqt| cm cudd. o kv c| ^{3/4}u| gu g f f ki kgn#
 C| v ku l>n w^fv o kpf gp ²tvgn gu go dgt c| Q| o^ap
 Dktqf cmq dcp. j qi { 3; 35 »c. co k>v j cvc k^{rk}>
 crvxcn>v xgu| vgw gn c u| w³p. o kpf^{3/4}u| g j Au| o kr/
 rk> go dgtg ngj gv u^ao ¶cpk0 | u gdd n ku crki nkrpe/
 ¶ o k^{rk}> c v^{3/4}3/4m c v^{3/4}ddk kf gi gp pgo | gv k²i 0 J^a/
 tqo /p²i { j cf ugt gi gv ngj gv euw^ap gdd n c š^rthk
 cp{ci d> r[~] ^an[¶]cpk0 O^at r g f ki eucnku c| ²xu^a| cf qm
 »c hgi { xgtj g| u| qmw. j u²itg u| ãngvw. gpi gf gn/
 o guu²itg pgxgn. ku| v v^{3/4}3/4m p²rt²vgi gv ngj gv hgn/
 hgi { xgtg| pk0 C o gi d[¶] j cvc r p pgo | gv k²i gm ngi hgn/
 lgdd škpuccvcdwtkcõ. ã²r ¶²utg. w³pr »u^autc.

i c | f c u^a i k e u r c v p c m j c u | p^a r j c w n 0 K v g p o g p w . g | g /
n g v c v^{3/4} n g m p g u . ^a m p f » c p f | c f^a u t c n³ u | . j c v^a t /
u | ² r k p g o | g k u² i g n g v c h g i { x g t g m n^{3/4} g r² d g g p i g f p k 0

R g f k i c | Q | o^a p D k t q f c m o r q n i^a t c c | v k u l » n
w f l c . j q i { u q m r q p v p n g m o c l f x² f g n g | p k j c t^a /
n g t Ñ c u q t 0 U q m u q m r² p | t g . j c f k u | g t t g ² u n e v p^a t c
n g u | u | Ñ u² i 0

C x k f i j^a d q t Ñ g m q t o^a t j^a t q o j » p c r l c h q n { k m
c v^{3/4} d d k^a m c o n^{3/4} 3/4 0 0

V^{3/4} n q t u l^a i g r g l p v g p g o h q i n e v^a n³ u 0 K r g v g
u g o n g i g u p g m x c m q w c o c i^a v 0 C v^{3/4} n q t u l^a i k c p c v p /
n^{3/4} k g v m o k p f g p n^{3/4} k g v o g i o q | i c w c m o k p f g p f k r m /
o^a e k c k g u | n^{3/4} v h g j c u | p^a n e m j q i { c r q t v^a
^a m p f » u g o n g i g u² i t g d² f l^a n 0 C | x q n v c h g h q i^a u w n
j q i { o g p v n v q x^a d d u k n g t Ñ V^{3/4} n q t u l^a i q v u g o r g /
i g u² i d g p v e t v e p k c p p^a n x c n » u | p v g p g d d² x^a r k m
j q i { c n^{3/4} r q p v k j e v c m c m o g n g w d g r g x c v n q | | ² m c
j^a d q t Ñ c 0 V^{3/4} n q t u l^a i d g x c v n q |^a u c r g f k i p g o e u c m
c | g t x k u | q p { q n e v k m g v g p . f g g t n^{3/4} e u k g i k u » t k^a u k
l g r g v u² i . d^a t o g n { l² r j g | e u c v r n q | k m k u 0 G w n
h Ñ i^{3/4} . j q i { c o^a u k m n³ v . o² i j c d q | » d c m³ p k^a n³
m c o . D w i^a t l c ² u I^{3/4} 3/4 q t u l^a i . n k n j g | h q i e u c v r /
n q | p k 0

G | g n c | c p c v p v f k r m o^a e k^a x c n u | g o d g p^a n q w c
O q p t e j l c ² u P² o g v q t u l^a i f k r m o^a e k^a l c 0 H² t h k e m
j c t e q n e m l² t h k e m e n u | g o d g p 0 G u | n^{3/4} 3/4 n d g p g i { k m
u g o x q n v x^a n i c w » u . C n g i g n n g n d d o² i O c i { c t /
q t u l^a i ² u C v u | v l c p c i { n^{3/4} k g v g . R e m x l e l p k t i t » h
x q n 0 T » r c c | ^{3/4} u | g u d e t^a v c k ² u g m p u² i g k k u h g r l g /
i { g | v² m j q i { o k n { g p Æ k i q p f q m q |^a u Æ l² t h k 0 J w o^a /
p w u . n g x² u u² g t u | c n q u . o² i k u ô x c i { v e n³ p² r r g p
c | ² t v ô j k j g v g v g p g t g f o² p { g u² i i g n w f l c n³ r x k /
u g p k q t u l^a i c² t f g n g k 0

C f k r m o c v^a m j c t e q n e m v g r l g u g t g l Ñ n d n = c |
g i { h t o c c n e f^a n | c | q p d e p o k p f n³ v q f c m p w i { c p c |
x q n < V^{3/4} n q t u l^a i n e v p c k j g n | g v g 0 C v^{3/4} 3/4 m f k r m /
o^a e k p g o h q i n e j c v q w^a n³ u v u g o c | g i { k m u g o c
o^a u k m k^a p { d e p . o g t v c | q t u l^a i g i { u | g t g p p g o x q n v

ngm nʔrrgp o q|i »uʃj cw»0 C hgi {xgtngl²u c dktq/
 fcqo »tkʔuk vtʔngʔp gi²u|gp ng|fgvigi gu^a mcrqv
 dcp xqn0 C jcfkcp{ci qm u^a nʃʃʊʔ tc pkpeu grʔi xcuʔv
²u jcl» ô o²i jc ngw xqpc ku grʔi gpf jcfkcp{ci 0
 Cjjq|. jqi { nʔvj^atqo u^a|g|gt go dgt d n^am» jcf/
 ugtgi gv o q|i »uʃucpcm j^atqo /p²i {j »pck kf ngnwg
 xqpc gl gm nʔʔ^{3/4} c xku|qp{qm nʔʔ^{3/4} V^{3/4}ʔ^{3/4}qtu^ai
 jgn|gv² o²i nʔp{gugdd² vgw. jqi { go gnwg²rr c
 h x^atqu xqv c rgi lqddcp v^ocf^auqncm nkʔxg0 C
 vto²u|gw n qn|gt u Fctfcpgrʔm pgo xqncm 3; 36
 u²p qn|cp^a mcrqv dcp. jqi { c h x^atquv o gi dʃj c/
 »cp o gi wf^vm xqpc x²f gpk0 Rgf ki c vto²u|gv ku
 c| go dgtk wfqo^ap{ ku o gi vgw c o ci^aʔ0 C Dcn/
 nʔp/lʔn|ki gv o gnwg jwn^ao|km c| Gi gl/vgpi gt.
 u|kpv Mqpuvcp^ar qn| x²f gr²tg vto go xg0 kppgp
 ngungp|. pci { fctcdqp jcl»|jcv» eucvtpc p{ʃkm
 cki u²ngugdd gi { pci {qdd xkʔi hqn|co p^anc gl c
 Fctfcpgrʔm u|qtquc0 G| ku U|co dwn x²f k0 C rctv/
 nʔp lqddtc/dctc^a i {Àn^ampcm dg²rʃvgw rctvk ʔvg/
 i gm u qw nʔ^{3/4}km u²v c f²rt n c vpi gtt n dgʔ^{3/4}pk
 cnet» gnpp²i gu jcl»nev. cj qn cnet^an0 Eucm jc gl v
 c xgu|gf gr²gu wcv o gi vgw²m lwj cvcm dg c| gnpp/
 u²i gu jcl»m c eucvtpc vtnqrv^vd»n c nku|p{ O^at/
 x^ap{/vgpi gtdg0| u. jc gl gp c vpi gtgp ukgt ʔn ku
 gi {gpggp²u|cnk k^ap{dcp^a x^ai plqm eucm cmqt
²tn|pgm o gi c h x^atqu f²rk mʔ^atquck cn^a. cj qp/
 pcp U|co dwn ô gr²ngvdp ô dgo d^a|pk rgi gv0 C
 h x^atqu kv c|qp c hʔ⁴f p{gnxgp hgm|km co gn|^{3/4}u|g/
 nʔ^{3/4}k Gwt»r^av f|uk^axen0 J c c|v²p c| go dgt nku²v²n c
 nʔpuvcp^ar qn|k xkrcpgi {gfdg c|w²p o²i nku² gr
 demcv²u|cntc. Dguk^au k^ap{^adc. ku²v gi { vgp/
 i gtu|qtqu rctv^ap vcn^arc o ci^aʔ0 G| c|qp dcp v²xqn
 t»n ugo qn|cp jqu|À eucvtpc. o kpv c Fctfcpgrʔm n0
 kv c| gwt»rck u^atc| hʔ⁴f. co gn|gp c h x^atqu hgm|km
 eucm gi {gvgp rqpvp. jcter»hqi »u|gt gp p{ʔkm
^{3/4}u|g c u|qo u²f nku^a|uck rctwcn< gl c Dqu|rqtwu|.
 co gn|d nc| go dgt c Hngv/vgpi gttg lwnk0

C xkʔi vʔ²v pgrgo dgp gl c| gi {gf ʔn^am hʔ⁴f/
 tcl|k hgn²ug cfw o gi gi {nqt Dk^apepcm²u i c|fci
^{3/4}ʔ^{3/4}m²i²v^a wgx o ck wʃfl^apcm U|co dwpcm c jk

jgvvrgp mwn^hhgl n f²u rgj gv u²i gk0 C xkfi / j^adqtÀ
gn w ku c n²v v²pi gt^u qtqu o gi x²f²u²p hqtf wv o gi
c v³/₄³mi { | grgo xci { dwn²u uqtuc0

C| gugo²p{ gm c| qpdc p qn{ cp j k vrgp l³/₄v²gm
j qi { c| ³/₄³mf r²p| | cxctqmen m² f v³/₄³m nqt/
o^ap{ pcm pgo xqrv² tng²ug gr²i i² o qf gtp²Àn o gi /
gt u²v²pk c u| qtqu gt f²o²p{ gk0 J qi { j c c| cpvcpv
j cvm cm eucr cvkpc m ukngt²Àn c n²t c v²pi gt^u qtqudc
dglw²pk c n²t xcrcj qn Elek² dcp rctv²cu^a mpk² u c|
qwe²pk xcu² xqpc r²nv o gi u^a mpk ô c| qtul^ai ²Àv /
gt²v U| vo dwn gr^ai^a m c| qtul^ai vgu²v n² u g| gn
V³/₄³nqtul^ai uqtuc o gi r geu² vgn f³/₄v²xqpc0

C| kl²À³/₄³m nqto^ap{ o kpl^a tv wcmqo tclw² uc
w²p p²o gv u| cngo dgtgngv² u nkn²r | vku vngv j q/
| cvqw ng V³/₄³nqtul^ai dc= fg c p{ wi cvk j cvm cm
k^apv dca^a u^ai qu² t| gm gngv xlugngv grgo gm o gi /
p{ wi cv^a u^atc² u o k²vgi { gm²pu²Àn{ q^a u²r r gp o^a u
pgo | gv²i vku vngv ku o gi j² kvw M²puvcpk /
p^a r qn{ dc0 C Fctfcp²m gt f²o²p{ gkpgm tgpqx^a /
n² u^atc o quv ku gi { cpi qn vku vk m²À²p²o²p{^a m²o^a /
uq| qw M²puvcpk^a r qn{ dc= u^a o u| gk²pv p²j^a p{ wecv
v²pi gt² u| vku v Nko r wu cfo k^a rku xgl gv² u² xgr0 Xgn²À
v³/₄dd r qn^a tkul cngo dgt0

V³/₄³nqtul^ai j^adqtÀ^a pcm gn lgrg o²i 3; 36
u| gr vgo dgt grgl² p l^a v²l » fqw ng0 C| qtul^ai dcp
wi { cpku o²i c t²i k grkgul gw j^adqtÀ hqn{ qo^a p{ c /
n²r r gp ²À { p²gxgl gw šner kw² ek² ñ² a m²qcm hgv0 C
i { | v²u p{ wi cvk j cvm cm n²p{ u| gt² v²gw² m g| gngv c
d² n²v n²t v³/₄³n²ntg0 C V³/₄³nqtul^ai dcp cm² gwt² /
rck^a mco r qn^a tqm ô ki gp pci { u^a o ²À ngtgungf /
eucn²f ô r² r^a vn pgo c v³/₄³m v³/₄x²p{ ngl² u j cpgo
c nq² | wk² v²mg² u c n² vctv² | vcn0 Pgo h² gwgm V³/₄
t³nqtul^ai pcm cf » v² gi { gu. m²À²p n²j² kxcvckm ku
xqncm² v² { xqrv r² r^a vn ucl^a v r quvcj kxcvcm ku0 C|
kl²À³/₄³m nqto^ap{ | cvpc m ner » tc l³/₄v c| gwt² rck j c /
vcm c n²pc m c v³/₄³m u³ / xgv² i² tv xcn² xgtugpi² ug0
Gi { gi { u² r pcr qp. gi { u| gt u| wn² pk tgp² grgwn
o gi u| ²Àv²gw c šner kw² ek² ñ² v0 O ci { ctqtul^ai .
Cwu| vlc. P²o gvqtul^ai. pgo u| v²kgv² d^at. fg dgrg /
v³/₄ f vgm gddg0 C| qpdc c| cpi qm² h² cpek^a m² u

qtqu|qm eucm c|cn c hgn²vgn gn xqncm dg/
 ngo gppk c nqto^ap{ gj cv³tl^au^adc. jc. gngpu|qi^an
 cv³uwn c| qwqo^ap nqto^ap{ c ši {cto cvqu³õ p²/
 o gv vku|vngv xku|cm³f k j c|^alvndc0 C u|wn³pk tgp/
 fgngv o^at o gi lgrgpv c nqto^ap{ pgo e^ahij cvqw t^a
 wcmqf»l^atc. m³4pdgp ku c m³4rqpvk jcvcm cm dc/
 t^au^aic m³4xgvppgddt n²tfngng ngv0 C p²j^ap{/
 perqu. k|icm cu fkrqo^aekck v³ti {cñuqm gtgfo²p{g
 c| ngw. jqi { pgo c p²o gv vku|vgn v³xq|vcm jcpgo c
 Fctfcpgn³m o gi gt u³2²tg o gi j³kw cpi qn m³4
 p³o²p{ u^anv jcl»tc²u c|v v²tv xku|c c H³4f m³4 k
 vpi gtgp^anqo^au| » cp{chnq³j q| 0

Co kv c| cpi qnm gj ci {v³m c v³4³m h x^atquv
 c xku|co ctfv p²o gvgm r³|cu ulgv²i i gn r³wcm j q|^a
 Mqpuvcp³r qn{ o gi gt u³2²j g| 0 C Fctfcpgn³ndcp
 j^atqo uqt cnp^av hmgwgm ng0 C u| m j gn{gnp r g f ki
 gi { jcto kpe³v o²vt o²n{ ce²nqftqp{j^an>v ku ngdq/
 e³vqwm c vpi gtcw³l^at»m gngp0 C u| vco dwk p²/
 o gv u|cn³tv m xg|gv lg. J gj n Äi { ugi³kw o ci^ap.
 o knqt o^at nkqi {qw c p{gtucp{ci d»n jqi { nkj c/
 r³u|v c| qtqu| vpi gtk cnp^anv0 C| qtqu|qm wi {cpku
 ucl^av vpi gtÄm²u rctvckm x²f gm²dgp. kf t n/kf tg
 o gi lgrgpvgn³ hngvghÄv³4. cnpctcm» i |³4gkmgn c|
 qtqu| xk³gnp²u U|vco dwn»n²u|entc uqtq|cvqucp
 fqd³m nk c pgj²| vpi gtk cnp^anv0 J gj n Ät o gi d³
 |qwk co kv c| qtqu| i |³4³m ghÄv³4ngm u²rgp nk
 o gpvgm c vpi gt qtqu| t²u²tg²u i c| fci |u^ano^ap{/
 p{cn v²vgm xku|c0 Y²dgt v³dqtpqm c| Äqppcp nk
 pgxg|gw p²o gv fcp^atrctcpeupqm pgo uqñ^atc o²i
 c|v ku gr³vg. jqi { ^an³ri qu cpi qn v³o cf^au xgu²/
 n³g o kw ô c u|vco dwk cpvcpv pci {n³4xvgm o kv/
 fgp vkcnq|^auc gngp²tg ô c v³4³m nqto^ap{ ng|^a/
 tvc c vpi gtul qtquqnv0 C Fctfcpgn³m ng|^at^auc
 uÄn³qu rtqxqñ^aek³pcm u^ao³kw c| cpvcpv u|go²/
 dgp< Qtqu|qtu|^aiqv²u u|³4xgv²i gugv g| c| kv²|ng/
 f²u gix^ai vc gi {o^au»r0

Ki gp ucl^au^aiqu. h³ri d²ng. h³ri jcf³ncr qv
 dcp xqnv c| Q|o^ap Dktqfcmqo 3; 36 u²p0 O kn³4 dgp
 c| gwt»rck jcfu|³pvtgngp c| gngphngm htqpv³c x²/
 tguj jwn³o|qw kf g/qfc. kv o²i o kv gp c fkrq/

o^a ek lgi {²dgp | clm^w ng⁰ O kpf gpnk wf v. j qi { V^{3/4}
t^{3/4}ntu^l aⁱ gugvngi gu j^a dqt^À u^l gtgr g cddep^a npc.
o k²n v^{3/4}dd gmgpu²i gu j cf kgt v g^rxqppk c| gmgpu²i gu
j cf u^l p^vgtgnt n o clf c| qn^v ng^{3/4}pk⁰ Gdd n c u^l go /
r qpv^d n V^{3/4}ntu^l aⁱ dgxcvⁿ u^l a^u pcm »t^k uk lgrgp/
v u²i g xqpc⁰

Hqⁿ km c jcte V^{3/4}ntu^l aⁱ 2tv. c u^l 2r ct^a 2tv
C| Qu^l v^a m⁰ ci {ct O qpctej kc xgl² tnetk h p^{3/4}ng
wcu^l mc u^l vco dwk n^vqpc^k cwcu² l^a v gi { ngpi { gn
pgo | gw² i qu^l v^a m v³ dqt^p qm^v. j qi { kpf p^vcu^u q
À p^c m c v^{3/4} m n^q to^a pp { cn gi { pci { ngt gungf gm k
j cl » v. c | a^l ukk v^{3/4} m v^p i tr ct v^q nt » r⁰ G| c j cl »
n^v p { ct qf l² m dg c U w^l / eucv^t pc d^g n^g l² dg² u qw
3⁴ pu^À m^l gu^l v² ugn | a^t lc gn c| cpi qm^m À l^a v⁰ J^{3/4} gp/
f qtk Eqpt^a f u^À i 3⁴ p { r c t c p e^u t c c| qpdep c t^g a^r ku
i qpf qm^u l^a u^À u^l vco dwk cwcu² / i gp^g t^a r ku^w pm n^{3/4}
| 3⁴ ng. j qi { c| cpi qn x² f g^r go nk^v p² u c j cl » v hg/
p² ndg h^À l^a m c r c t k À v^g i gm o lgn w d^g n^v p { ct qf /
j c v² m c eucv^t p^a dc⁰ M^À v³ p d^g p ku. c j cl » v c o qp/
c t e j k^a p c m n^g m^g p^g o gi x^a u^a t q^r p k ô j k^u V^{3/4} m^l
qtu^l aⁱ o² i pgo x^l ugn j cf cv ô² u p^l { c u^l go² n^l | gv
2^u ego gpv d^g u^l gt² ug j^a t qo o k^r k » n^q t q^a dc ku d^g n^v /
ngt À p^g 0

D² eu pgo ku x^a r u^l q^r v c| cwcu² ft » v^l g^r p^v 2^u p^g 0
D^g n^v v c v^g t x nk^k j g^v g^v p^u 2ⁱ v⁰

Wⁱ { cp^g | ngw xqpc c uqtuc c n^{3/4} x^g v^g | o gt² u^l
qu^l v^a m xgl² tnetk v^g t x p^g m ku < gpi g^f l^g o gi c v^{3/4} m^l
j cf À { o k^p k^u v² t k w o . j qi { c| qu^l v^a m⁰ ci { ct j cf /
ugt gi 3⁴ x^g p^g | gt go dgt² v^a u^l aⁿ f^u c v^g p i gt p⁰ G|
c m^À v³ p^l o² p { o clf j^a v^d e^v o cf lc c I c^r f^e k^a d^c p. c
o qpctej kc mgp m^À f qtqu^l j cf ugt gi gv⁰ C| Cem^g /
o c p p / h² n^l kⁱ g^v 2ⁿ n^g m^g w xqpc nk^{3/4} p^k g^p p^g m c
euc^v p^c n⁰ K^g p^a o . fg c v^{3/4} m^l gⁿ m^q t o² i t² u^l k^v
pgo xq^r v j cl r p f » c o qpctej kc q^r f c^r p d^g x^c vⁿ u^l p^k
c j^a dqt^À dc ô o² i v^k qⁿ d^c p ugo ô . o^a u² u^l v r g^f kⁱ
n³ p^p { xq^r v n^{ku} l^a o p^c p^k < c v^{3/4} m^l u^l aⁿ f^u j cl » m qⁿ
eugⁿ ? n^l j q^t f n^r r gu² i gm j qi { h² r² x^k i n^g m^g w xqpc
k^f / g^f c j cl » n^l | p^k m o p^l c| qu^l v^a m j cf ugt gi gv

Dguu|ct^adk^adcp rctv^c vjgwgñ# xqpc0 P {qre/v|
 2ejgrqptc ngw xqpc u| ãnu²i0 Gpp{k r g f k i pgo xqm0
 C u| ãnu²i gu jcfkcp{ci i cn tcnqf^auucn gi {Aw. gi {/
 gi { 2ejgrppcm v| pcr ngngw xqpc euwr^ap gi {u|gtk
 hqtf wñ uj q| 0G| c vgtx ugo ngt ãnu nkxkggt0

Qm»dgt dgp Æcdd hcpvcu| vñwu kpf ¶x^ap{v vgw
 Eqptcf < dgeu^auqp tgpfgmg|²u²tg c v³/4³m nqto^ap{
 3/4xgpg| gt 3/4pn²pvguv. cnkngv U| gr v|e| nk it>h qu| v^am
 v²dqtpqnpem tgpfgp²p gm cñ0 G| gngv Mku/f| uk²p
 ngtgu| v ãn^a vlxpp²m c mwd^apk nq|^a nqm xk²n²tg. jqi {
 qw. c nkuqtqu| qm n²/4³v hgmgr^auv u| ¶ucp^am c e^at
 mgp0 C u| n²x U| gr v|e| nk h²x²tg wi {cpku nkuqtqu|
²tugm xqiv Ngo dgti dgp0 C fcr²u. dghqñ^auqu²u 3/p/
 e²n^a d²euk o^ai p^au/nqxcui gpgt^aru c| qpdep. cnk^an c
 vgtx xqncn²r r gp nkpf wñ. pgo u|^ao qiv j^atqo n²/4
 t ãn²pp{gr0 C| gi {km n²/4 ãn²p{ c v³/4³m nqto^ap{
 »xevqu^ai c²u^a n²j cv^aqu^a m^aur qpvc xqm0 C o^aukn^a
 jc c v³/4³m nqto^ap{ gn ku u|^apc xqpc o ci^av c n²/4/
 r qpvk jcv^ao cm o gngw xcn^a n^auhqi rñ^aut^c. ngx²u
 nevq^al^ad>n pgo cfjcvqw xqpc gpp{kv gi { kn(gp
 hcpvcu| vñwu gzrgf ¶ek^a e²n^atc0 Jcto cfkn^a o kpf c
 v³/4³m nqtu|^a i k o kpf c mwd^apk nq|^a nqm²u o kpf gp nku/
 qtqu|. mgpu²i g c| ngv qñ uqñ^a gnp{qo » kñ^ao
^amco jcv^aqo pcm ô xku| qpv i c| fcu^ai k qnqnd>n ô
 j c vwxcn^alc c e^atk tgl uko pgn^a g| c tgl uko l>»^atq
 xgu| k o gi vgt²p{gk0 C j^atqo qm n²/4 ãn d^ato g²{km
 ku gr^ai nqo qñ cjjq|. jqi { c v³/4³m nqto^ap{ grxguug
 c Eqptcf/l²rg kpf ¶x^ap{v0

G| w^ap c| qu| v^am o ci {ct jcfxglgv u²i o²i
 gi { vgtxxgn rt>d^amq| qw. jqi { V³/4³m nqtu|^a i qv c
 o ci c e²rlctc hñj cu| p^arlc0

G| c vgtx gi { o ci {ct vctvñ^anqu vku| v. dk qp{qu
 I qpfqu N^au| n^a pgx o²tp³/4m pgx²j g| h| fkn0 G| c
 xcno gt go dgt hcvcmqt^adcp c| cpi qnm ngl²p r²x
 gi {kr vqo k rgt>ngwo hqtt^auqnp^an vcpwv dgrg c xg/
 i {2u| gk u| cno^adc0 C| v^ap j c| cl³/4v²u c xkñ^aij^adqt Æ
 nk³/4²ugmt o kpvv ã²t|^a u| n^au xqpwwdg0

C nupucp v^ar qñ k qu| v^am o ci {ct n²/4gu²i tg

g|gndgp c perqndcp gi { perdctp[¶]qw cteÀ hcvn
o ci {ct vku| v^a n[¶]qw dg0 Hgr wewc c| qu| v^a m jcf/
Ãi {o kpkul[¶] v[¶]tkwo. u v o²i o ci cucdd jcv[¶]u^a i qm
gnu tcpi À qncmqo rxxgrkv² u p{[¶]rw rctcpeuv cfqw^a v
c n[¶]kgu² i k vkn[¶]tpcn0 Gu| gtpv D²eu hgu|[¶] n[¶]lc c
n[¶]kgu² i gv ctte. jqi { I qpfqu o²tp³/m vctv[¶]n[¶]qu
jcfpci {pcm r[¶]gv r[¶]gi o kpf gpdgp c n[¶]g²tg l^atlcpem
²u o kpf gp n[¶]x^a pu^a i^a v[¶]gr[¶]gu[¶]u² n0

C hcvn o²tp³/m rgr r[¶]g[¶] v[¶] kn[¶]qu m[¶]rf gv² u² pgm
e² n^a v² u c n[¶]kgu² i wtck^a o w[¶] u| go o gn hki {gn² m
gn cf^a u^a v0

ô Qw. cj qn Gi {kr vqo c X³/₄u/v[¶]pi gt rctvck/
p^a n x² i| fkm² u u| go dgp xgr c ddrck U| k[¶]ckj gi {
l² n| ki gvg p{[¶]km c v[¶]pi gtdg. qw^a m c| cpi q[¶]qm gi {km
r[¶]gi h[¶]pvucdd p{gtucp{ci h[¶]tt^a uc< c f| ugo ucj k pchc/
vgr r ô o ci {ct^a | v I qpfqu o²tp³/m ku g[¶]tk c xk/
f² ngv u| cngo dgtg c[¶]pcm co kg x^a ncm[¶]q| qw² u o c/
i cu rtq[¶]gmqtqm ugi[¶] u² i² xgn n[¶]gt[¶]gu| v[¶]n ku xkwg o^a t
c| šCto gg qdgtm[¶]o o c[¶]pf q[¶]o/p^a n jqi { n[¶]gm[¶]rf l² m V³/₄
t³/n[¶]tu[¶] i^a qp^a v Gi {kr vqo dc0 P go eugn[¶] n[¶]gdd h[¶]n/
cfewcn o k[¶]v c| | c[¶] t[¶]qddcpuc h[¶]n c f| ugo ucj k r gv
t[¶] r[¶]gw h[¶]tt^a uq[¶]n[¶]# G[¶] n[¶]cn c| gi {kr vqo k cpi qn jcf/
ugtgi. fg o ci^a pem c| cpi qn ep{cqtu^a i pem jcfk
krctc ku »t[¶]uk n[¶]tqnev u| gp[¶]xgf pg0 J ku| gp c f| ugo /
ucj k rgt[¶] r[¶]gw n[¶]wcm u| q[¶]n^a n[¶]cl^a m c|^a | ulck² u gwt[¶]/
rck cp[¶]vp[¶]tgr Æn i² r g[¶]lgm v[¶]g[¶]gtcw[¶] m u^a o^a tc u| Æn[¶]
u² i gu dgp| k[¶]pci { t² u² v0

I qpfqu pgo uq[¶]n[¶]tc³ xgp³ n[¶]pv[¶]gu[¶]gn² u v[¶] | v³/₄
t³/m n[¶]vq^a xcn g[¶]wc| qw M[¶]qucp[¶]vp^a r qn[¶] d[¶]n Ct^a dlc
h[¶]r[¶]0 Gpxgt o ci c ku n[¶]ki cmi c[¶]v[¶]uq[¶] h[¶]q[¶] cf v[¶]0 C| k[¶]gp
h[¶]pcu| v[¶]nu v[¶]tx v[¶]w| gw c x² to gu. h[¶]pv[¶] | k[¶]f Æu
jcf Æi {o kpkul[¶] v[¶]tpgn0 I qpfqu² m c v³/₄ m n[¶] | gp r[¶]x .
^a v[¶]mg[¶]gu v[¶]pi g[¶]trctv[¶]n j qu| Æ ul[¶]cvci k j qo qm^a p/
fqt[¶] u w[¶] p. l[¶]gr[¶]v[¶]mg[¶]gp nku n[¶]cf k[¶]q[¶]n[¶]gp n[¶]ngm^a v c
U| v[¶]g| /³ d[¶]r[¶] p² u u| g[¶]tp[¶]u² ugp n[¶]n³/₄ v[¶]gm F| ugo ucj /
dcp0 C| n[¶]gv d² n[¶]u c[¶]tedq[¶]ncm p² | . i {cp[¶] v[¶]cp cp/
i qn tu² i gv r[¶]n w² n0 Hw[¶] r² udgp n³/₄ Æ[¶] t[¶]qj cp[¶]cm c
v[¶]gr[¶] gp² u o k[¶]fp[¶] Æw n[¶] | ki t^a p^a v[¶]nev f[¶]q[¶]d^a n[¶]cm u² | /
l[¶]r0 C j c[¶]tedcp j cv go dgt[¶] Æm g[¶]rugw0 C v³/₄ d[¶]l[¶]gm xku /
u| ct[¶]qj cp[¶]cm c rctv[¶]q[¶] xgu| v[¶]gi n nku xk[¶]q[¶]n[¶] uck[¶]q|² u

vgrlgu ugdgu²i i gn ki {gng|vgn xku|c c| $\frac{3}{4}d\frac{3}{4}n v\tilde{A}n\gg$
 qifc¹p r²x $\frac{3}{4}d\frac{3}{4}m$ rctvtc0 C l>kf gi|gv hkcven o²t/
 p³np³gm o²i cttc ku xqrv i qpf lc. j qi { xku|cl³kgv
 l²p{nr hgn²vgrngv nr u| $\frac{1}{2}ugp$ jcl>lc^a t^atdq^at>n c|
²i ki i qo qn{i>. hngvg r¹pi qm²en ²i cpi qn rgt>/
 rgwo hqt^auqt>r0

C $\frac{3}{4}d\frac{3}{4}m$ nqto^ap{ eucm o quv² dtgf v t^a. o kdg
 xkwg dgrg g| c j wu^atqu eugrngf gv²u o gi jctci wf qw0
 J cf d $\frac{1}{2}$ >u^ai k gr^at^au c¹ xqv¹m I qpf quv²u j c c u^a/
 tc|. u| go $\tilde{A}x$ gi gu. M $\frac{1}{2}$ pu²cp¹kp^ar qn{dcp pci { dghqn^au/
 ucn d $\frac{1}{2}$ > dclqt g| tgf gu. M $\frac{1}{2}$ guu xqp M $\frac{1}{2}$ guugp¹ug¹kp d^at>
 pgo xgu|k j cvj cv>u v¹o qi cv¹u c¹ c nku o ci {ct
 vku|vgv. K $\frac{1}{2}$ gp wf lc. o k o k¹pf gp $\frac{3}{4}d\frac{3}{4}v$ pv xqpc xgrg0
 | tfgngu m $\frac{1}{2}$ pdgp. j qi { M $\frac{1}{2}$ guu pgo go r $\frac{1}{2}$ k go r¹m
 k¹cvk dcp g| vc| gugo²p{v0

C $\frac{3}{4}d\frac{3}{4}m$ nqto^ap{ pcm gpp{k r t¹qxqn¹ek> w¹p ô
 cnetxc. pgo cnetxc. j cv¹tq|pk ngrngw0 Gpxgt¹pgm
 r g¹ki pgo xqv¹pgj²| c x^aru| v¹u0

\tilde{v} i {^a mcm c| \tilde{A} i {gm o knqt $V\frac{3}{4}d\frac{3}{4}n$ qtu|^ai pcm
 u| $\frac{1}{2}$ pv ngrngw xcncpk0 F n tg ngrngw lwpkc c|²rgv
 j c¹n n¹tf²udgp0 C| qu| v^am¹o ci {ct j cf ugtgi xgl g/
 v u²i g pgo u^ao qrv gr¹i i² c j c|^a lwn¹tv hqi i cn²u
 nr $\frac{3}{4}d\frac{3}{4}o$ o gn jcteq> u| gtdgm nr u²i dggugw gn|^apu^a/
 i^axcn= eucrcv¹kn¹pcm cwi wu| wu pgi {gf kn¹p nk ngr/
 rgw xqpw¹q¹m Dgr¹t^afd>r0 P²j^ap{ j²vgn nr u dd gr/
 gugw Ngo dgti²u c| qtqu| ugtgi gm I cr $\frac{1}{2}$ ek^ap ngtgu|/
 $\tilde{A}n$ $\frac{3}{4}d\frac{3}{4}p$ r $\frac{1}{2}d\frac{3}{4}m$ c M^atr^aqm cr^atc0 C hgnk²nk o c/
 i {ct h $\frac{1}{2}$ f dlt vqnquqm o^at hgm \tilde{A} f vgn²t²v ngu t²i k²/
 i gkn¹gv. euc¹r¹f k gtgm|²kn¹gv c o \tilde{A} | gwo dc.. j qi { pg gu/
 ugpgmc| qtqu| qmng|²dgo

L $\frac{3}{4}v$ t $\frac{3}{4}k$ f gup c o ctpgk eucv0 C p²o gv v¹o c/
 f^au x²tgugp $\frac{3}{4}d\frac{3}{4}v$ o gi = c u|²rgugp j $\frac{3}{4}o$ r $\frac{3}{4}d\frac{3}{4}i$ O ctpg
 hqn> per qn¹p^a v uqf qtc. tqul fcu| $\frac{1}{2}$ p j w¹o clp. c
 euqpn $\frac{3}{4}d\frac{3}{4}u$ p²o gv²u htcpek j qn¹gugngv0

Hgn²vgp u| \tilde{A} m²i xcp vj^av Dgtr¹kdgp \tilde{A} lcdd
 u| $\frac{3}{4}d\frac{3}{4}gu$ ²i gugntg0 Y cpi gpj glo d^at>v c vgwgt u. pc/
 i {qp \tilde{A} i {gu n $\frac{1}{2}$ pu²cp¹kp^ar qn{k p²o gv pci {nr $\frac{3}{4}d\frac{3}{4}gv$
 u \tilde{A} i g¹km Dgtr¹kd n²tlgp o^at gn gtgf o²p{v c nqo k

v²p²n co gn{pgm| cxc f³/pv c v³/4³/m o ci cvct²u
h³/4³/u0

Y cpi gpj glo o ci c ku l»n wf lc gl v0 P go c u²Ā/
i gv²u. pgo c hgp{gi gv²u. j qi { xku| ctgpf grkm= ucl^a v
j c| ch^a i c² u gi {²pk co d²lelc n²p{u| gt² k c pci {
gij cv² tq|^a utc0

U²Āti ³/p{v m²Āf Dgtrkpdg< c x^arcu| f³/pv²pk hqi
qtu|^a i qnpcm² u go dgtgm o krl>kpem uqtuc. ²ngv. j c/
n²nc h³/4³/u0 J c c x^arcu| ki gpn. c rxxlpc gkpf wn x²/
u| gu Ā^atc0 Y cpi gpj glo c xk^a i v³/4³v² pgrgo dgp
u| kpv gi {gf Ā^am> fkr mo^a ekck eugrngf gvtg n²u| Ān<
gi { xcmo gt² u gu| gu^a mco l²thk^a r^atcvcp ³/4³v²/
j g| n²tkj c|^a lc l>x^a j ci {^a u^a v0

Gi { dk qp{qu= V³/4³ntu|^a i qv hcpvul vkwucdd/
p^a n hcpvul vkwucdd vgtxgmmgn² u gu| o² mgn dgo d^a |/
v² m o kpf n² v qrf cit>n0 Y cpi gpj glo c l^a p^arcv c| qpdep
l>| cp² u tg^a rku0

Y cpi gpj glo gn u| ³/4 c pci {xgl² ttgn rt>d^a n
v² ti {cpk0 U| ckf J cko. c| gi {kr vqo k j gtegi c| qpdep
u| grff² u i i³/4u pci {xgl² tk j q| |^a l² tj gvgv² u² i² xgn
nklgrpv² gw< ug hgi {xgtg. ug o wp²lelc. ug twj^a | cvc.
ug hgn| gtgr² ug c j cf ugtgi u^a o^a tc plpeugp0 C v³/4³/m
hrgn u v² p{gl m ² | pgo o gi vpgm dgrg gi { Ācdd
j^a dqt Āc0 Y cpi gpj glo c| qp x^arcu|^a tc. j qi { P²/
o gvqtu|^a i o clf o kpf gpv m²Āf. co k ngn c pci {/
xgl² t u| ngr vkwucp nklgrpv² gw< c| gm² r| gij gvgv²
o² i cmqt ku. j c c hrij cm c| qw p² o gv hqt^a uqm nk/
cr cf j cvvcpqm ngpp² pgn0 O gtv j ku| gp U| gtdlc² u Tq/
o^a plc h³/4³ tcl| kci grx^arcu| v^a m P² o gvqtu|^a i qv V³/
t³/4³ntu|^a i >n0 C ugo rgi gu Tqo^a plc o gi pgo gpi gf
j cf lep{ci qv u^a n² | cpk o gtv c| xku| qp v c| u^a o^a tc
xqpc p{² | v u| ² | pxcn^a u0

C| gi {nqt k p² o gv n²xcvku| v n² wc. j qi { gl | gn c|
wf xctku gi {kr vqo kcnugo o ktg ugo ngj gvo gppk0

J^a tc xqrv o² i Gpxgt0

Y cpi gpj glo o quv o ci^a j q| c| kl^a v³/4³/m nqo ² |
v² j g| hqtf vn0 Gpxgt. cnk tgpi gvgi per k o v² n² l^a >n
cnk² tv t^a perrcn guk o gi dgu|² r² uv n² tv0 Gpxgt
rcuc j cf Āi { o kpu| vtgp n² | x Ān Vcrv rcuc² u c nqt/
o^a p{pcmo² i gi { jcto cf km vci lc. F| ugo^a n c|

špcw»rck wi tkūō ô ¶ { pgxg| v̄m ul gtvg c| qtu^ai /
dcp ô kulgrgp ngu| 0

C p²o gv^a mco l̄tthk Æi { o gpv gn c| 2llgrk w̄f̄n /
nq| »tc. Gpxgt rcuc r̄n̄i^atc. jqi { w̄f̄v< g| c r̄i /
v̄i cv^a u² r̄g^vpgm j c|^al^a2tv x[¶]kqw r̄i h̄p̄v̄qucdd jctec
ngu| 0 Kv f n gn o k̄p̄f̄gp0 Kv eucm xci { i { |pk xci {
gr̄up̄kgr̄j gv̄0

Cw»p jclvcvqw Gpxgt rc̄m̄v̄l^adc. Ukuk k^a /
p{^adc0 C| Æqp o^at crki l^atv xcrcnk0 U^{3/4}v̄v̄ guvg xq̄r̄.
M̄p̄uc̄p̄v̄p̄^ar̄q̄n{dcp kn{gpn̄t o^at pgo pci {qp u² /
v̄^ani cv̄pc̄m c| go dgtgn̄0 O gpv n k̄p̄n̄dd n̄4 gr̄f̄km c|
go dgt c v̄gpi gtrctv h̄r̄². cpp^an k̄p̄n̄dd 2tg|jgv x²
x^ark̄m c H̄nḡvg/v̄gpi gtt n gttg u^am» n̄ḡm̄go gu. gi {gp /
r̄vgu ul gm 0 C v̄k̄m̄c̄u| v̄» o gr̄i dgp ku Æpp̄rn h̄nḡv̄ /
dgp 3/4 3/4 v̄v̄ pci {n̄4x̄ḡv̄pgm l»r̄gugw c j u[¶]v̄ r̄i^atco /
r̄v̄0 Gpxgt gr̄i o guu|g r̄c̄m̄w c p²o gv n̄4x̄ḡv̄i v̄n̄
cpp^an n̄4 gr̄gdd xku|qpv c v̄gpi gtrctv̄q| 0 Kgp pci {
j^a|cv xk̄w0 Rqo r^au r̄c̄m̄v̄l^apc̄m c| qpdcp r̄i ul gdd
n̄k̄p̄eug h̄rgu²i g. Pcf|uk jgtegi p . c ul w̄^apk w̄p̄q̄n̄ /
j w̄i 0 C jgtegi p pgo ul q̄n̄w̄ xgpf²i gm gn w o w̄cv̄
nq|pk o²i Ægu. h̄q̄to cū^ai qu xgpf²i h̄q̄i cf^aun̄t ugo 0

C r̄c̄m̄w̄ o quv n̄k̄j c̄n̄p̄c̄m r̄i v̄u|q̄w0 C h̄nḡvg cd /
r̄c̄m̄t̄q̄n̄l»n̄ crki ngw xk̄i i qu0 Co kn̄t c| 2r̄ Ægv̄
dc̄n̄u^atp{^ap Y cpi gpj glo . c p²o gv pci {n̄4x̄gv̄ n̄k̄ /
u^anv̄ n̄q̄euk^ad»n̄ h̄r̄i k̄r̄p̄v̄q̄w0 Ct̄tc i q̄pf̄q̄r̄. jqi {
kv xcrc̄o gn{km c̄d̄r̄c̄m o 3/4 3/4 v̄v̄ h̄q̄i ku²v̄ gi {ul gt gr̄ /
f ipk gi {/n̄²v̄ v̄p^aeun̄q| » go dgt gn w. xk̄i i qm o k̄ /
r̄k̄»muqtuc0| u gddg o quv ku dgr̄gu| »nj cv̄0

F²n̄w̄^ap n̄er̄v̄c o gi Y cpi gpj glo Dgr̄i p̄d n c v̄k̄ /
n̄q̄u[¶]i^au^À u^Ài 3/p{v. co gn{ o gi cf̄v̄c c m̄^Àv̄p̄r̄gi gu h̄r̄n̄ /
j cv̄c̄m c|^au⁰ Qn{cp h̄q̄i {xgtv̄ j q| qw o ci^ax̄cn̄ co²n̄ /
n̄{gn c n̄g|²dgp i { |pk h̄q̄i 0 Vḡj^av̄ ugo o k̄ qm c| k̄ i c /
r̄q̄o tc0 P {w̄i c̄m̄o o c̄n̄ r̄r̄gw dg c v̄ku| v̄r̄ḡv̄²tg n̄k̄k̄i /
i ¶q̄w̄r̄r̄eu j^a|dc0

ô Vgu²m jcn̄lwm c| gn v̄t|gu| v̄uḡnv̄ ô
o q̄pf̄lc v̄¶ r̄gte o Ækc. h̄gpp. c| go gr̄vk̄ f̄q̄i q| » /
ul q̄d^adcp r̄cuu^À p²o gw²i i gn Gpxgt0 L»n̄ dgu²nv̄ p²o g /
v̄^Àn̄ j ku| gp²x̄gn̄p^a vx̄q̄v̄ Dgr̄i p̄dgp n̄v̄p̄ck̄cw̄u²0

Y cpi gpj glo ngo ²p{gp. o gtgxgp Ān0 O kpyj c
n¹ y cxcvcp d ttwj c vctvp^a ³/₄u| g vgu²v0 Uko ^ap. ^av
i qpf qncp ng| f dgu| ²f²dg<

ô Gzegngpek^a qm pci {qp l>n wfl^a m j qi { c j^a dq/
tÀdc xcn» dgr²r²u pgo j cxcu| y cv» vx^add0 C| gt /
xku| qp{qm o quv qn{cpqm j qi { p{¶ncp o gn²pm ^am/
j cypcm ô o gtv j ku| gp tgo ²ngo. gddgp c u| ^apf²mw¹
dcp pkpeu n²w²i 0

F| ugo ^an²rrgp hgrgpk cnetv0 c ngi kn¹dd cpvcv/
dct^av c j^atqo lgrgp²x o kpkul vgt n¹4 Ān0 Vknem| »
o q| f wrcwn go grk | ³/₄i . ngo ²p{¶gw o cp| ugw³l^av0
M²k²tgu o gn²p nk¹v²ugk hgm¹u| pgn0 C o q| f wrcvc
hkpqo cp. gl Āuv³ugp o gi eu³tgppgn0 Gpxgt c| qpdcp
t^ap²| nq¹n¹i^al^atc ²u F| ugo ^an pgo u| »n ugo o k0
Y cpi gpj glo vj^avhqn| vclc<

ô Pgo cnetqm ku²v²ugndg dqu^avnu| pk0 Gttg
o quv pkpeu k¹ 0 G| ²tv qw hqn| vcvqo. cj qx^a ngi wqn»
o gi dgu| ²r²u¹pn¹qt o ^at grlwqwpn0

ô Vgto ²u| vgvugp ô d»rkpvGpxgt0

U Āpgv0

ô C| cwi wu| wu o ^auqf kn¹p n¹4³/₄v o gi ^amcr q/
f^au. co gn{gv c pci {xg| ²t nqpcn^adcp ¶wpm c¹.
nqto ^ap{ckpm n¹4³/₄v dk qp{qu i c| fcu^aik ²u rqrkknck
vgo ²u| gv u| ³/₄kgw²i gv j q| qw r²vg. ³/₄p³/₄m c| qpdcp
c| v ku l>n wfl^a m wtcko. j qi { nqto ^ap{qo gl gp v¹n/
o gp ngi ku o gi d¶^auqnev cfqw pgn0 0 U| ¶²u| ngf²u
xqpc gddgp c ntkmwu j gn| gvdgp o quv Āi / vgp/
pĀpm o kpyj c pgo wfp»m o kpf c p²i {gp. j qi { V³/₄
t³/₄nqtu| ^ai dgcxcvnu| ^auc c xk¹i j^adqtÀdc. o kn{gp
hqvqu v²p{gl 0 C p²o gv eu^au| ^atk nqto ^ap{ c| qpdcp
ô dgu| ²rlĀpm xk¹i qucp ô c| v ku l>n wflc. j qi {
V³/₄³/₄nqtu| ^ai t²u| ²t n gl c| gt m o czko ^an¹u^av lgrgp/
vgo²0 K| gp gt hgu| ¶²utg c v³/₄³/₄m nqto ^ap{ v¹n p gd/
dgp c rgtedgp gi {gf Ān pgo ku xqpc n²rgu0 G| ²tv
o gi hqvqn¹u v^ati {^ax^a vgw²m Dgtrkpdgp. o k o »f qp
ngj gvp² l³/₄gp¹ u| ³/₄kgw²i gu¹pn¹gm j cvj cv»ucp ug/
i ¶²u²i²tg l³/₄ppĀpm j c gnu| ^aplc o ci^av j qi { c n¹4³/₄u
e²r²tv j cteqrlqpo O kgn w c| qpdcp gl gngv c| Āl hrij c/
vno c| ^auqnev t²u| ngvugp n¹4³/₄p²o. u| gtgv²o
gzegngpek^a qm»n o ci wv»n j cmcpk o k c x²ngo ²p{Ām

c| c| qppcrk eucvrcnq|^a ut»n j c o k g| v c o czko^a rku
ugi ¶u²i gvhgrel^a pñwmA

C j^a tqo gi {o^a u o gmgw Ñn o kpkul vgt nñ4 Ñn
Gpxgt x^a ru| qñ0

Gn ul^{3/4} ruucp ngtgu| vdghmgk euk| o^a u rñ dck0
Eucm c| w^a p ul »rcn o gi 0 J cpi l^a pcm ucl^a v^a i qu. ngn/
rgo gu. p lgu eugpi² ug xcp0

ô Gzegmgpek² f pcm ki c| c xcp cddep. j qi { ku/
o gtv v² p { gngv pg ng| fl Ñpm Æd»n v^a ti { cpi k0 i { v/
j^a v eucm c nñ4 gng| ngv ul gtgv² o ru|^{3/4} g| p k0 C|
qwqo^a p eu^a ul^a tk nqto^a p { ki gp l»n wflc. j qi { c
dgcxcvnc|^a u i { | grgo gugv² p pci { gn p {^{3/4} ngv tglv gv
o ci^a dcp0 Qtqu| qtu^a i uk gmgpu² i Ñpn0 Cpi rñc j cl»/
knev o^a t gffki ku nñ4 i rñc² u dñmñ f cñw vñc
qtu^a i wpñc0 Qtqu| qtu^a i grñ tng| gvp gm rñ vñc c|
k^a v gzc p| k»u vñ4 gm x² ugk o gi xcn»u² u^a tc0 K gp. g| v
l»n wflwñ0 C nñ4 r qp k j cvm cm i { | gm g. j c ul^{3/4}
xgv² i gugm xci { wpm c Dcmñ p/ hñ n| ki gv gp. fg Mku/
f| ul² dcp ku lgrgpv u vgt Ñngvñj g| lwvcpc o kngv
xku| c0 J ku| gp c| w»ddk² xgm uqt^a p c Dcmñ pqp ki gp
2 t|² ngp { xgu| vgu² i gkpm xqncñ0 G| gngv c vgt Ñngvñj
o kpf gp vñ4^{3/4} m j c| chk xku| cññ^a plc0 O kpf g| v r gf ki
c|² tv o qpf qo gn j qi { c vcp^a eunq|^a uqm uqt^a p
ul kpv² i go gv² u Gzegmgpek² f^a ncn qñ l»n kuo gtv
p² o gvdt^a v^a i wpnev² ul ul gt² u l»| cp qñmñen ku
cññ^a v o cu| co 0 C| qpdep o kpf g|. uclpqu pgo lgrgpv
j gk c| v. j qi { o k o gi hñpvñ^a u p² mñ dngxgvñ gñ Æm
o ci wpnev c j^a dqt Ædc0 p l»n wflc. j qi { dkqf cñ/
o wpm »tk^a uk o² tgvk o gmgw. o kpf gp o q| i »u^a qw^a n/
rñqv gngp² tg. uqm j gn gp. o kpv c r gt| uc j cv^a tqp² u
Elekñ^a dcp. U ¶ñ^a k^a dcp. Rergu| v^a dcp. O g| qr qv^a o k^a /
dcp j² | ci quem c x² f gm k xqpcñkpn0 Ngi h dd i { gp/
ngv² i Ñpm h rñi c o qf gtp hñu| gtgr^a u j k p { c. p { gtu/
cp { ci² u gi {² d j cf kcp { ci qm c| qm co gn gñ gm j cf /
Æ gpgv gugv² p pgo xci { wpm d xldgp0 Go dgtgkpm
ul^a o^a p. xci { d^a vtñ^a i^a p pgo hñi o Æpk c f qñi.
gtt n dk vññ^a j cvqo Gzegmgpek² f cv0 Vg j^a v o gi kpv
xku| c ngm eucm v² tpgo qf c. cj qñ cdcej ci { wm wqn»
o gi dgu|² rñ u Ñngvñ nñc f »u ugi ¶u² i p² mñ nñ r vñgpgm
xci { wpm gi { kñ gp pci { .^a vñ cñek»tc0 Hñgu| go c

nʔtf²uv< o k c| c nʔpnt²v lcxcurv. co kv gttgxqpcv
nʔ| »rci Àl hgrj cvm c|^auck crrl^ap Gzegmgpek^af
vgj gvA

C j cf Ñi {o kpk| vgt ul cxck o²i qw Àu| pcm c
rgxgi dgp00 gtgxgp p²| kY cpi gpj glo gv0

C p²o gv pci {nʔkxgv c| qpdcv pgo j k^adc gi {km
ngi lqdd fkrqo cv³lc j c|^al^apcn0 P go ulgv nkgt^avgpk
nʔtv^ak0

P go vgj gv k o gi gn dd cl^aprv^av0 ~i { pgo
lwwpmgn ddtg0P c|^av i {gt Ñpmeucn0

ô P gngo ku xqpc gi { nʔtf²ugo < o km xqpa/
pcm c| qm c hgn²vggm co gn{ gm o gmgw gzegmgpek^a/
vqm j clmpf »m xqpa pcm c f³/pv r²r²ugngv o gi/
xcn»u^acpkA

F| ugo^an rcuc dquu| Àucp nʔj kpv. w^ap l²rrgteki
nʔu| 3/4 Ñkvc vqtn^av0Vcrvcv pgo o q| fvr0

Gpxgt x^arcu| qn Àtc0 Eugpf gup. ngr| gw kf gi gv/
u²i i gr0

ô C nʔto^ap{ c pci {xgl²t ul go²n²dgp o^at
vgw ~ p³/npgm gi { cl^aprvqv c ngi w»ddk o gi dgu²r²/
u Ñpmeucn^axcn00

Y cpi gpj glo ctec vx^addtc ku dquu| Àu o ctef v0

ô M²tgo. ctte o^at cf wpm x^arcu| v0 C| qm c
nʔk^apu^ai qm pgo hji cf j cv»m gn o gtv o gi xcn»u^aij c/
vcrcpqn0 Xk^ai quep nko qpfxc. gpp{ k gt v pgo xqp/
j cwpmgnucl^avo ci wpm»r0G| uqn0

O quv Vcrvcv ul »n nʔj dg. o²n{ qtqu| r²pj cpi l^ap0
C p²o gvlg ô d^at nkvp gp dgu²n ku ô Ñi { j cpi /
| km o kpvj c v³/4 Ñn dgu²rp0 Vqtqnj cpi qp. v³/
t³/nr qtqu| qu nkgl²v ugnn²tf gl <

ô Gzegmgpek^af Àl o gi j cvm c|^auqnt »n dgu²n0
O gn{ gmgl gmAG| vnʔtf knqnr²i^ao ku0

Eugpf rgu| 0 Y cpi gpj glo j cni cv0 Gi { gptcpi À
gmgphgrmgn xcp fqi c ô i qpfqr0 O clf nk²t gp
x^arcu| qn<

ô C t²ul rgyngv kngv gp pkpeugpm hgrj cvm c/
|^aucko 00

Vcrvcvul »rcno gi Àtc0

ô Uclp^aqo Gzegmgpek^af |^atm»| qwu^ai^av0 O quv
pgo o kpv c nʔto^ap{ vi lck j cpgo gi {ul gt gp.

o kpv c j c |^a l^{a2} tv cii » f » kh^À v^{3/4} m nqo k² vi lck
 ã^À p m^ˆ ppgnu | go dgp0

ô .. t^À v^{3/4} m j qi { g | v o qpf v c ngi { gm gu wtco
 ô hgnn Y cpi gpj glo 0 ô ¶ { vj^a v .. p^{3/4} m ugo p { kv v
 nu | pcm j kxcvncup. co knqt hgn² vrgkngv n^{3/4} v^À m xg/
 ngo . c o gi n^À k^a pvp² o gvugi ¶ u² i o² t^v n² vknv gp0

Gpxgt c | cln² dc j cter 0 G | o gf f r gpi gl^a v² n0

T^{3/4} k f eugpf^a mo quvdg0 Y cpi gpj glo o q | f w
 rvcwpw ã^À 0

ô J gtt Dquej chgt. c | .. p^{3/4} m qtul^a i^a xcn o k
 ul ¶ k^À p m o² n {² d n tqnpu | gpxg | ã^À p n0 C | qpdc p c |
 3/4 p^{3/4} m eu^a ul^a tc v^À q w cur k^a ek^a ncv x² n c M^{3/4} g n
 Mergv p o gi xcn » u^À j cvk0

Y cpi gpj glo p { klc c ul^a l^a v j qi { c | qppen
 n^{3/4} dgul » rlqp0

Gpxgt c | qpdc p. n^À k p m ul go² n { gu d^a vt u^a i^a t » n
 ngi gpf^a m ngtkpi gpgm c v^{3/4} 3/4 n^{3/4} m n^{3/4} 3/4 w j kvrgp v³ /
 o cf v. gffki tkn² p² ul rgnv ul kpvu² i² x^{2,3} 2 u ul » /
 nko qpf^a u^a xcn c n^{3/4} k gvng | r gtegnlgp o gi ngr k² u ng/
 hgi { xgt | kc p² o gv f kr nqo cv³ 0

Eugpf gupg hq^À vclc0

ô Vj^a v kw v^À q w cur k^a ek^a t » n xcp ul ». co g/
 n { gm c o k² tf gngkpmgn p² o kgi ã^À n^{3/4} pgn0 V^{3/4} 3/4 n
 qtul^a i j clf cp pci { xqiv² u j cvm cu0 C f gnef gpek
² xgldgp c n^{3/4} r qpvk j cvm qo c i { gpi g ul w³ p qm crw
 nkj w^À w c j kxcvq w xg | gv m ng |² d n0 C t² i k vgt ã^À g/
 vgm gnu | cnef vcm v ã^À p n0 Dwri^a tk. U | gtdk. Cnd^a plc

ô j^a dqt ã^À j^a dqt ã^À w³ p. eucv xgu | v² u. eucv xgu | v² u
 w³ p l^{3/4} w uqtte0 O quv kuo² v gt² n { gu kh^À v^{3/4} m ng | gm
 dgp xcp c ul vco dwk j cvm qo² u o k gi { dgnqx^a euqrlwm
 c | v. co k gi { dgvtv | kn0 Xcpcpm wi { cp nkugddu² /
 i gkpm fg pci { t² ul v j q | |^a pm ngi n^{3/4} gngdd^a m » p² r /
 hlqn0 O k ngo² p { 3/4 n^{3/4} mgn i { ã^À lwm gt uu². gi i {² g | v
 c ul² v qti^a euqrv ugt v. o gt v c j kxcvq w xg | gv t² vgi
 kw c v^{3/4} 3/4 n0 J c pgo ¶ { eugnggf p² pm o cj qipcr ã^À {
 l^a twpm o kpv Dk^a pe0 Gi { gvrgp x^a tqupm o ctf
 Gw » r^a dcp² u gi { ul² r pcr qp c | v ku g^À hqi nrle c
 dqul rqt w | k nk^a tetc co ã^À { ku x^a i { » qtqu | xci {
 cpi qt0 G² tv ngnpgm pgn^À p m o quv gt u ul^{3/4} k g v
 u² i gugn0

Gpxgt kw o gi^anv²u o²n(gv r̄rgm)kn0 C|v̄p
hqn(wlc<

ô Gmqt c|qpdep c|v ngm vrcu|vcpwpm jqi {
x^ancu|vw²u pci {tgdgeu^ārv u|³kgv²i gu^āpm c jvcn/
o cu P²o gv Dktqfcrqo . ²tf gngkpnv xgu²n(g|gv .
ngx²u² u|kpv gtxngv nq^xa euqr0 Dgtrk/dci fcfk
vpi gn(v cnet nk²r[¶]gpk u|tcv̄ikck xcuwcm̄en ic|/
fcu^aik ³u|gn³vg²ugmgn g|gtp{k nup|wrcn ngtgu/
ngfgrk Ā {p³n³amgn ekktwj^au ncvpcvku|vgmgn²u
o cu|n[¶]iqw x²f tu²i i gr0 Ctt>n^am qfkm jqi { gn/
lwMcdwki . Chi cpku v̄pki²u kpf²ki 0

ô C| cpvpcucl>dep o^at u|kpv n³4jgm² x^anv
c|qp^an[¶]u . jqi { P²o gvqtu^ai šgi {kr[¶]ak^ampkō cnetlc
V³4³4ntu^ai qv0 Gp wfqo ô p{gn gi {gv Gpxgt ô .
jqi { g|v gmgpu²i gkpm vcr̄n^am nk²u pgo jku|go .
jqi { g|ki c|0 Fg gmgpu²i gkpm c|v o qpf¹a m jqi { c|
³p³m j c|^alc hgn f²u²pgm ettc c rqp^atc²tv .
co gn pgm v̄4²vpgm k Ālc c šhgtr̄² v̄4²uō fkpco k/
mwu u^afkw^adcp xcp0 Gppgm c|^ancvpm o²i ng/
x²u² kuo gtv v̄4²vgrgo hku|>hck v̄4x²p{u|gt u²i/
pgm o gi hgn gp P²o gvqtu^ai j^adqtĀdc ngxgtfkn0
C|v̄p l³p c j^adqtĀ U^a|g|gtp{k rqtqu²u u|³kgv
u²i gu gr²t|km gi { euqo » hcnw . x^atquv grkgu|vpgm
xci { p{gtpgm c|v̄p ngl fkm Ātc0 G| c xk^ai i {cntcp
³u|ghqi .. p³m gmgp0 C j^adqtĀ w^ap r gfk̄i . jc p{gt/
pgm jcfkucteqv t>pcm nk .. p³ntg . gu^ām{gu|vkn hqu^a/
lwnev²u gm̄dq||^am²xgm »c pgi²| l^atcf w^ai i cn
i {^atvqw³4f³4m u|gtu^ao cknv0

ô Fg n³tgo 00

ô Rctfqp. g|v c| cpvpcucl> ¶lc. fg c o k
u|go rqpwpnd>n g| hqpvqu0 Jc dgrxku|Ām c p²r gv
gi { j^adqtĀdc. cncrqucp n³4Ān ngm p²|pĀpn0 Gn tg/
dqu^avqo . jqi { c| gn dd x^a|qncm pgo c|²p x²rg/
o²p{go . gmgpu²i gkpm n^av^am ¶i { . p^ajc c xcn^ai dcp
dk qp^atc pgo ¶i { xcp0 Vwfqo 0 U|>xcn o k .. p³amgn
u|go dgp pgo gi²u|gp c| ³p|gv²u²u ³pe²n^ai p²n/
mĀn xcn> l>xku|qp{²rk| k xci {wpm²u c|v ugo o k
pgo xgi v^ām tquu|p²xgp .. p³nv n ugo .. p³m v nĀpn0
G| o kpf eucv c|²tv xcp. o gtv gi {hqtō^ap u|gtgv^ām
j c|^apnev²u m^āfĀpm qtu^ai c|kpn³t0 G| u|go²n(gu

2t|²ugkmpg²u o gi dgeu^ñu^ñpn^ñp ugo o kv ugo
x^anq|vc0

ô J gn|gu ô d>ñkpY cpi gpj glo 0

O gi ngr v²u o gi kpf^ñqvc c v^{3/4}m rqrkkmw/
mññ^ñi c hpcvkmw j c|cu|gtgv⁰Gddgp ô j c ugo o k
o^audcp ugo ô gi {hqt o^am m ngwgp< c Mgrv²u c
P {wi cvñ^ñvpci { hkc0

ô O kpf gdd n c|qpdep c| n^ñkgvng|km j qi { cñf
mñt. co kmñt mñññ|cvqu j^adqt Ædc o gi { Æpm dgrg.
co gn²tv x^amcpwpm ngm c hngn u²i gv c u|wñ^ñppcn
c v>p^{3/4}m^ñaugn c pci {xg|²ttgn²u V^{3/4}mñt u^ai
o kpf gp r qñ^at^axcn u|go dgp< ô pqu. cmñt. o k eucm
go dgtk u|^ao ñ^ñu u|gtkp vñrgugp hgm^ñu Ængp o gi g/
v^ñpm dgrg gddg c j^adqt Ædc0

Y cpi gpj glo ñuucp xg|gk x²i ki gt u vñkpvg^v
c j^atqo o kpk|vgt cte^ap0 Ugo o kv ugo qñxcu ng t>/
ññ0 C v^{3/4}m c ngi x^an^ñi qucdd r kncpcvñdep ku
p {wi qf vcm ñ^ñu|km u|kpvg n^ñ4^{3/0}d³upgn0 P gnk o c/
i^apcmñuucp hgl²dg u|^amc x²t. j^aveucmv Ægrgo 0

ô Wtco. hñj cvcm c^auqo xcp ettc. j qi { n^ñ4
t Ædgn Æñ jcto kpeo kñk> hñvp {k c|c| jcvu^a|o kñk>
hccpñ {k v³o qi cv^ñuv c^la pñcm hgn .. p^{3/4}mpgm t²u|dgp
ctep {dep. t²u|dgp j cf kcp {ci dep. j c c| gmñp²i gu/
ngf²uv|qppcno gi ng|f kn0

C ñi { | Æo^{3/4}2^uv ku o gi ngj gv gw xqpc j cñ/
ñpk c vgtgo dgp0 Gmñtc^{3/4}u|git n o²i c v^{3/4}m^ñ4
ugo^am qf vcn0 Gdd n c|v^ñp Æi { hgn ngj gv u|gtgpk c
v^{3/4}m j cf ugtgi gv. j qi { c| o²i c| gnkgw vgt Ængvngv
ku xku|chqi ññj cvlc0Kvplpeuj gn|g cmñpcn0

C|qpdep Gpxgtpgm j k^jgvvgn Æñ pci { c|^{3/4}/
wtcm c00 kpk|vgt^vtuckj q| hqt f wñdgu²ñgvgn#

C|qm^{3/4}u|gp²|pgn0 Vmñcv u|»ñcn o gi gn u|^{3/4}.
o²n^ñ dcuu|wuj cpi l^ap0 P go Gpxgt. j cpgo Y cpi gp/
j glo hññ hqt f wñc o qpf lc g|v<

ô Gi {gm xci {wpm c j cf Æi {o kpk|vgt Ætcr0
Vñrgu o²t^vñdgp gi {gm00

ô PquA ô k^ap {wn Y cpi gpj glo ce²ñqu j cpi lc
Gpxgt hññ0 Gpxgt ci {^av. d^at o²i hñcvn go dgt
²u ugo o k dclc ukpeugp c x²tp {qo^au^axcn²rrgp qñcp
hqt>> x²tj wñ^ño^{3/4}vk gn o kpv c| ko²pv Y cpi gp/

j glo 2v0 G| c| 3/4u| gi ô ki gp. gl c| 3/4u| gi c| v lgrgpvk
 j qi { o gi ngj gv gt u|gpk o kpf gp gt f|vo 2p{v. o qf gtp
 hgi {xgtgngv. j cl»nev. a i {Ànev. nqxcnev. wplhqt o kuq/
 nev. 2rgm ku| gtgngv ngj gv x^au^a tqpk= c j cf ugt gi gv
 gwt»rck Æv nřr gu j cf ugt gi i 2 hlgngu| y gvkn0

~ tk^auk hrgn uu²i gv 2tg| o ci^adcp< o quv c|.
 cnkpgm eugngngf plg ngn0 Gi {u| gt 2tg| vg o^at 2ngv/
 dgp gl v c ucl^av 2u p²rg uqtu^atc f³/pv r kncpcqv.
 cmqt. co knqt nk v | vg Cdf wn J co kf gngp c hmgřu
 |^au| rcl^av0 O quv < V³/4³/nqtu^ai 0 V³/4³/nqtu^ai qv nřt/
 fg| v²m 2u Gpxgt x^aru| qn ô c x²u| vgt j gu hrgn uu²i
 vřlgu wf cv²dcp0 G| 2tv c| »t^a2tv gi {gf Æn c| pgxg
 ngu| hrgn u0 Fg xcpm kf m co gn| gmlgp o kpf gp qt/
 u^ai pcm u| Æm²i g xcp ngi cř dd gi { qn| cp lřthk Æc.
 cnkpg0 v²t nkc hrgn uu²i x^ancř uc cn»n0

O quv o^at gi 2u| gp p{wi qf v0 P go tgo gi c
 j cpi lc ugo <gl c j cm²u dk vqu fkr nqo cvc/j cpi 0

ô C| cl^aprv. j c l»n 2tvwgo. c| kl Æ³/4³/m nq/
 o k²pcmu| »n0

Y cpi gpj glo eucm gi { r kncpcv v³/4gf²nřki i qp/
 f qm| kn= c| v²p o^at 2tvk ku c nřtf²u hqpvu^ai^av.
 co gn| gvnko qpf^aucnqt c| qppcno gi 2t| gw0

ô C nqo k²pcmu| »ř#

ô Cmqt pgo ngm o kplu| vgt vcp^aeu gr² xkppgo
 c| Æi {gv0 G| gn tg nku^ao |j cvcvcp kf gki vct» gr
 j Æ »f^auv lgrgpvgp0 O k j^ato cp. kw gi {gm xci {wpi0
 C| cl^aprvqvgrhqi cf wni0

ô O knqt ng| fj gvkm| cnek»vA

ô J qipcr 0

G| xkři qu dgu²f0 J^atqo lřthk ng| gv hqi gi {/
 o^auucř0 Gi { qtu^ai uqtuc gr² n0

Ⓜ C u| vco dwk ncrqm u| kpv²r^atj w| co qucp c|
 gugo 2p{gmgm tgpfnřk Ænk nřcf^auv j q| vni0 C šVcplpō.
 co gn| pgm O wu| vch c Mgo^an gi {nqt Vtk rku| dcp p²x/
 ngi gu o wpcv²tuc xqm. ugd²dgp p{qo qw. tgpfnřk Ænk
 nřcf^au^apcm gnu qř cř p| c e|p^amv c tgpfnřk Ænk nk/
 cf^auqm»tk^auke|p dgv kxgn<

šQTQU\ Vf OCF f UC V' T' MHNQWC
GNNGP #6

š3; 36 qm»dgt j cto kpe0 ô O kpv j kxcvrcuqcp lg/
ngpvkm j wul qpp{qrecf knf p c Hengvg/vgpi gtgp d²n²/
ugp i{cnqtrvq/» v³/4³/m hqw³v c| qtqu| j cl»tcl.
o kpf gp gn | gvguj cf Ā gpgvgvp²mĀn o gi v³ o cf v⁰

C| qvqo^ap eu^aul^atk hqwc gi {u²i gkpgm c šLc/
xw| U wn³p U| grko ð/pgm²u c šO kf knkō/pgm ukngtĀn
xkuu| cxgtplg c xcno gt v³ o cf^au⁰ Qn{cpp{ktc. j qi {
c| qtqu| j cl»j cf lqddpcm n²vc xkuu| co gpgmĀpk nk/
n³/4²dg0 C v³/4³/m j cf kj cl»m gi²u| U| gdcu| vqr qn²u
Pqxqtquu| klu| m nk³/4² ki Āf³/4²v²m c o gpgmĀn qtqu|
hqw³v0 Dqo d^a| v³m c nk³/4² dgp^am j cf kj cl»nev²u
rctvk gt f²ugngv. o clf o gi vqtr^auwn gnuĀn{gu| vgv/
v²m c| qtqu| hqwc p²j^ap{ nkugdd gi {u²i²v0 G| w³p
xkuu| cv²tvgnnk³/4² knlg0

C j kxcvrcu lgrpv²u o²i j q||^ah | vg. j qi { c
eu^aul^atk nqto^ap{ j crcf²mcrcpwn o gi vgwg c u| Ām²/
i gu n²r²ugngv0

Y cpi gpj glo x²i tgj clqwc vgtx²pgm o^auqf km
t²u|²v ku0 C j kj gvgvrgpĀn xcno gt v³/4³ngv ukngtĀn< c|
^arwj^au hqwc o gi kpf²qwc c hqn{co cvqv. co gn{pgm k
t²x²p V³/4³/nqtu|^ai xkuu| cxqpj cvcvcpwn dgrngtĀn c
M³/4²r qpvk J cvcm cm qrf c^ap c xk^ai j^adqtĀdc0 O gtv c
šLcxw| U wn³p U| grko ð²u c šO kf knkō c xcno^ai dcp
n²v p²o gv j cl» xqn0 C šDtgurc^w0²u c šI qgdgp00 C|
Gpxgt nqto^ap{ xgwg o gi ngv rctcpeupqnqu»n
o cvt»| qu»n c p²o gv nqto^ap{»r0 Uqvej qp p²o gv
cf o k^arku xg| gwg c hengvgvpi gtk cnek»v c šDtgurc^w0
hgf²q gv²p0

P²j^ap{ gnu^apv. l»u|^apf²mĀ go dgt gnj cv³tq|^auc
xqrv g| gi { dktqfcrqo uqtuc hrgv0 J qi {cp hqi x²i/
| fpk c xcno gt ng| fgv< c| v gnmqt o²i ugpnk ugo
n²v j cwc gn tg0 X²i| fj gvgw xqpc xk^ai t^atcu|»n fkc/
fcmn ku. V³/4³/nqtu|^ai pci {j cvcm^apcm hgn³ o cf^a/
u^axcn0Fg c xcno^au| p dd pgo g/ c| guj gv u²i xqn00

00 Cnkm cppenkf gl²p t²u| vgwgm gddgp c ng| /

fgo²p{gl²udgp. o c o^at o kpf jcmwcn0 C v^{3/4}v²pg/
 ngo. co kv m eulpa^ancm o²i pgo²tgw o gi ctte.
 jqi { c| w»nqt x²i ngi gu ¶²rgvgv o qpf lqp t»nm²u
 vgwkm r0 J kppk ngm jqi { j hck xqncm j c|^alwm
 pcm²u co kvvgwmj c|^alwnlex^atc xcm»pcm j kv²n0

Dk qp{qu. jqi { c o ci wm cnetvc u| gtpv kp²| /
 ngfvgm cmqwo^ap{qu l»x^aji {^au p²m»0 Cddep c|
 kf dgp gl o²i u| qnevrep xqn0 C|»vc Mergvgp ku. P {w
 i cvqp ku r^awm l²thcm gi²u| uqt^av. cnkm Cvcu| pcm
²tg| v²m o ci wnev. x^amwtc xgw²m j c|^alwnv²u xk/
 v²m cddep c| k^ap{dcp. co gn{gv dqrf qi w^auc A^a /
 pcm r^awcn0 J qi { c| k^ap{ j gn{gu xqn/gA Ctt»n c| »vc
 o^at nkrcmwvc xk^ai x²ngo²p{g0

G| c jkv eucm cmqt d p. jc c|. cnk xcmc. tqw| /
 jku go . xci { i {gpi g0

Y cpi gpj glo dk qp{^atc pgo xqn gi {km ugo 0
 | u GpxgtA

Kvgp ¶²nv h^{3/4}v²g0 Vtci kmw x²i gv²tv. fg pgo
 u|²i {gpvrdgugv0

V²xgf²ugk c r kpp¶² v²xgf²ugk xqncn0 | u c| qnpcm
 c uqtuc. cnkm gn r^au| ¶²km c| wcv c| ki c| k pci {qm
 u|^ao^atc<o kpf ki vci kmw0

Ogtv V^{3/4}v²qtu^ai ki c| k pci { go dgtg cmqt o²i
 pgo r^argw c v^{3/4}v²pgrgo u| ¶²prcf^atc0 Owu| vhc Mg/
 o^ak fleu u²i²tg o qpf jcvwm c| gi²u| Gpxgtô Y cp/
 i gpj glo cnek»dcp lq^ap{k t²u| g ugo xgk0 U v. vgn/
 lgu gtgl²xgn gmppg| vg Gpxgt²u Y cpi gpj glo vgxgk.
 V^{3/4}v²qtu^ai gi²u| j cf dci^ar²u²v0 Eucnj qi { u| exc
 o²i gmqt c r wu| v^adc nk^an» u| » o ctefv0 V^{3/4}v²/
 qtu^ai pgo t²i nkpgxg| gw dwi^atkck nevqpek cvu²lc
 pgo gr^ai dghqn^auqu go dgt cjjq|. jqi { c eu^au^atk
 nqt^ap{²u c eu^au^atk j cf Ai {o kpu| vt uqtuf^{3/4}p
 r²ugk vngtgu| v^arj A^aj cuuc0

ZKOC p²o gv u^{3/4}xgu²i²u gtgf o²p{gk0

Owu| vhc Mgo^an eu^au^atk qwqo^ap xg|²tmetk crg| /
 tfgu wi {cpku gl gndgp c uqtuf^{3/4}p v per qndcp m^ar²/4/
 f^{3/4}p vct»| nqf qw0 C xk^ai j^adqt A gn w t^{3/4}k l f gn^avj g/
 n{gl vgw o ci^av c U| cmppknv n pgo o gu| g hgnx U »/

h^adc. Dwi^atk eu^au^atk v^{3/4}m n^evqpc^k cwcu²pcn⁰ O /
 n^{3/4}ug kw ugo uqm vggpf d n^anq^w C n^{3/4}gv. Hg^yk
 dgl ô uqm k^lgp p^gx v^{3/4}m h[»]thk²iv gddgp c| kf /
 dgp ô Āi { go i²ngl km o gi cwcu²l^at[»] n o k^ov cnk pgo
 ul[»]k^gugp l^at v²tucu^aidc²u o gi ngj gv ugp p²ru^lgt v
 r^gp go dgt⁰ Jqi { x^allqp o k²tv cⁿctv Mgo^an
 gl^gndgp c x^an^ai qu kf ndgp gmgt[»]pk V^{3/4}m²tu^ai
 h^{3/4}f l²t nA C| v o c ugo ngj gv v^grlgu j c^vatq^l qw^ai i cn
 o gi^ancr[»]cpk⁰ o ci c uqj cugo dgu²iv gtt r⁰ Ngj gv.
 jqi { ²tgl v^g c pci { kf m ul^gg²pgm h^wxcm^vv²u gl²tv
 pgo n^{3/4}pv qwj qp r^gppk c uqtuf^{3/4}pv pcr qndcp. jqi {
 pg n^gndgp o ci^av g^zrqp^apk gi { km k^ap { dcp ugo O Fg
 ngj gv c| ku. jqi { uqⁿen rt[»]| ckdd qn^qm[»]ncrpf x^ai {.
 n^{3/4}p { gl^gx^anq^l^au. xci { jcuqⁿ[»]m xqⁿcm qn^ek gⁿj c/
 v²tq^l^au^apcn⁰ Ngj gv. jqi { U[»]h^adc c ngxgugdd
 o wⁿe ku xqp^lq^wc²u c h^grgo gⁿw o gi ul^cxc^lqw tgr/
 tgl gp^vek[»]u n^{3/4}m²i v^{3/4}ldrgv k⁰ C r²p^l gt u ul^gtgr gv
 l^aul^qw gm^qt O w^lvchc Mgo^an²rg^vdgp ô jku^lgp
 xci { qpc crkⁱ xqⁿ²u[»] { v^lul^vp h^kg^vu²d n ngmgw
 o gi²ipl^g0

*šRqrwct yct fgt Mtkgi plejv ô fcu Xqimjcwg
 ngkpg Uko o gō ô[»] l^am o²i c n³u ddk p²o gv n^evqpc/
[»]m ku c v^{3/4}m^{3/4}m j^adqt Ā^at[»]r⁰ U^lgtk^ov[»]m ku ..jcl^atf/
 l^av²nō xqⁿv V^{3/4}m²tu^ai jcf dcr²u^g0 Rgf ki gl^gmc
 v^{3/4}v²p²ul^gm l[»]n kuo g^tkm c v^kn^qu p²o gv^{3/4}m ul^gl /
 f²u⁰o²i ku gl^cx²rgo²p { Āⁿ0*

C j^adqt Ā²u c| cm^qtk p²o gv^dct^au^ai ngi²rg/
 ugdd gm^gp^l k n^{3/4}v xqⁿv c| cm^qt o²i lgrgp^vmrg^gp
 v^{3/4}l^uku^v ku. O w^lvchc Mgo^ar⁰ U[»]h^ad[»]n gi { o^au/
 w³p cf^w hgn Gpxgtpgm²u c n^qto^ap { pcm d^avt/
 j cpi Ā u[»]Āi^{3/4} { gk⁰ O gi ngm cf^{pk} c⁰ v^{3/4}v²pgrgo ngi /
 d^avtcdd go dgtk fqnwo gpwo ck gl^gmc ngo^ark u[»]Āi^{3/4}
 p { ^{3/4}m co gn^lndgp d^avtcp ul^ggo dgu^{3/4} gl^gv x²rgo²/
 p { ²v gi { xgu^lv²dg tqj cp[»] pgo | gv j^kxcvⁿqu n^{3/4}gl^gpm
 h^gh^qi^au^axcr⁰ C| qp^dcp²rrgp cm^qt xqⁿv h^qn { co cv
 dcp c p²o gv^gm n³ul[»]rci hgnct[»] | v^vj c^vv^gep xqp^w
 n³uc R^atk^lu h^gr⁰ i { v^gj^av Mgo^an c^gl^gtf^gu gt²n^lgu

wcu¹uk nər qw Mqpuwcpk^ar qn{d>n jci {lc c| qp/
pcn cddc c j^adqtÀ gngp xcn» ci k^aek»v0 C p²o gvgm
l>n^a npcm²u o kpf gp¹Aw i { |pk hqi pcn0 X^atlqp v¹
tgrgo o gn²u pg nqen¹ | wcuuc c hgl²v0

00 C n³/xgvg| euqr qtvqu¹udcp. »tk^auk ul²v
ul>tv i { t dgp^a nqw hgn c v³/4³m jcfugtgi c xk¹i/
j^adqtÀ gngl²p0

C| 30 ul^ao À jcfugtgi c p²o gv Nko^ap xqp Ucp/
fgtu rcuc xgl²p{rgv/ crw. Mqpuwcpk^ar qn{v²u c
vgpi gtu|qtquqnev x²fvg0 G| xqnv w¹p c nqi hqpqucdd
htqpw|cncu| = jku|gp gmnqt o²i c ulqo ul²fqu Dwi^a/
tlc²u I³/4³qtul^ai^a n¹uhqi n¹uc ugo xqnv dk¹qu=
gl gmkv¹o cfj cwcmo kpf gp rgtedgp0

C 40 jcfugtgi gv. F| ugo^an rctcpeupqm^ai c crw.
Mku/f | uk^adc²uc Dcm¹p/h¹ni ki gvgp qu|qv¹mgn0

C 50 jcfugtgi. Jcuul^ap K| gv i gpgt^aiku xgl g²ug
crw^a nqw= gl c jcfugtgi À | pngx| gw ..r^apw^apk/
o wu jcfugtgi gō xqn0 Gpxgt²u c| klAv³/4³n¹n# nqi pc/
i { qdd^a m c0 C| v ulgtgw²m xqpc. jc c|³u|gu. n³/4²r/
^a|ukck c dk¹qfcmqo o cn ulqo ul²fqu v³/4³m v¹t p²/
rgm gi { gu¹ngm xqpc V³/4³ntul^ai i cr0 C| gtdgk| u¹p.
Ctfk¹p. c rgt|uc jcv¹tctvqo^ap {qm c Mcwn¹|wu/
Mko. c Xqn c/xk²m Vwtngu¹v¹p. Ej kxc²u Dqnj etc.
G| gngp c rqpvnq. gi { vrilgu jcfugtgi gp n¹k¹Àn lg/
ngp²ngp { ul^ao À³/pn¹pvgu²u eugpf tcrnwrcqm ku
^anqwcn0

M¹n¹p n¹vgu¹Av c| v¹p gl gpn¹k¹Àn o²i gi { pgi {g/
fkm n¹hgl| gwgp ul¹ck jcfugtgi²u gi {³/p^am jcf/
ugtgi i² gi {gn tg o²i pgo gi {gu¹gw³/4³km o gl q/
r q¹o lckugtgi kuc rgt|uc jcv¹t k^ap {^adcp0

G| gmngn c jcfugtgi gmngn xqncm vj^av n³/4¹Àn
v | fgng c j^atqo xk¹i t²ul tg vgtlgf V³/4³m Dk¹qf c/
nqo jcv¹tck²t|²ngp { rqpvlck0

Gppgm c o gi ngj gv ugp rc|c. gi {o^auucn pgj gl gp
²tlpvg|²u²rrqn| pgj gl gp o q| i cvw jcfugtgi/
i { t pgm gi {gu n¹peu|go gkd n lwqw eucm gi {/gi {
jcfvguv xci { jcfqu¹v n¹ f|uk. Chkne²u Gwt>>rc l>/
hqt^ap o kpf gp gi {gu xgu²n{gu. gmgpu²i gu t²ul g
hgn¹0

C $\sqrt[4]{3/4}$ m j gn{gugddgp. Gpxgt gnu vgtxg o quv
c| xqrv j qi { g| c i { t gn u| $\sqrt[4]{3/4}$ Gi {kr vqo hgrg. vg/
j^a v Chknf dc eu $\sqrt[4]{3/4}$ quqf l² m nk $\sqrt[4]{3/4}$ utg0 G| xqrv c|
go r $\sqrt[4]{3/4}$ ngl gyv U| vgl /cnek0

U| vgl. c| cpi qn $\sqrt[4]{3/4}$ r $\sqrt[4]{3/4}$ ngf² u² u w^a pr »v^a u $\sqrt[4]{3/4}$ /
gtg. $\sqrt[4]{3/4}$ gn hgm $\sqrt[4]{3/4}$ v c j^a dqt $\sqrt[4]{3/4}$ gn wk $\sqrt[4]{3/4}$ m $\sqrt[4]{3/4}$ j cv^a tj q| 0
Rcrgu| vpc f² rk t² u| g² u c eucvqtpc $\sqrt[4]{3/4}$ v gi { o kpf/
 $\sqrt[4]{3/4}$ u| g u^a | $\sqrt[4]{3/4}$ xgp nkrqo² vgt u|² ngu j qo qmukxcvi hgm
u| kn0 G| gp ngtgu| $\sqrt[4]{3/4}$ n ngm i^a | qpk $\sqrt[4]{3/4}$ $\sqrt[4]{3/4}$ dngn $\sqrt[4]{3/4}$ v| gp $\sqrt[4]{3/4}$ /
g| gt go dgtgn co kj g| xku| qpv j $\sqrt[4]{3/4}$ u| g| gt. pci {t² u| v
x $\sqrt[4]{3/4}$ j qtf » vgxg u| $\sqrt[4]{3/4}$ m² i gu0

C| cpi qnm Cej kngu/uctne. U| vgl. c| ^a v^a t»
kpf^k dc. c| qpdep o gi $\sqrt[4]{3/4}$ v c xgu| gfgm gv0 C $\sqrt[4]{3/4}$ m
p² o gv U| vgl /v^a o cf^a u dcukngttgn x² i | f $\sqrt[4]{3/4}$ 0 Go dgt/
dgp. ² nrm ku| gtdgp. x $\sqrt[4]{3/4}$ dgp. wcnlcp² u h n $\sqrt[4]{3/4}$ r r c| cp/
i qnm gm $\sqrt[4]{3/4}$ m^a u^a dcp gnu^a o $\sqrt[4]{3/4}$ qw^a m o ci wnev Gpxg/>
t² n0 Y cpi gpj glo pci { $\sqrt[4]{3/4}$ xgv lgrgp² u² tg xku| cj $\sqrt[4]{3/4}$ /
v^a m Nko^a p xqp Ucpfgtu rcu^a v= xqp fgt I qm| rcuc k
xg|² t^v dqtpci { . c t² i k kf m p² o gv $\sqrt[4]{3/4}$ m v^a dqtpci {c
ngt $\sqrt[4]{3/4}$ c j gn{² dg0 Fgego dgt grg|² p² tng| gw rg $\sqrt[4]{3/4}$ c
 $\sqrt[4]{3/4}$ m h x^a tqdc g| c hcpel^k u o qfqt $\sqrt[4]{3/4}$ p{wi qf v. kf u
p² o gv $\sqrt[4]{3/4}$ J c c| go dgt I qm| xg|² tnetk h p $\sqrt[4]{3/4}$ m pgm
go r $\sqrt[4]{3/4}$ nkcvcldcp r qpvu ng $\sqrt[4]{3/4}$ t^a u^a v qkcuuc c| qnpcm c
u| $\sqrt[4]{3/4}$ p{ p² m $\sqrt[4]{3/4}$ $\sqrt[4]{3/4}$ ugnpgm co gn{gnv c u| vgl k j cf l^a/
tcvq ngngpg c eucrcvqmpcm x² i ki u| gp $\sqrt[4]{3/4}$ xgxf p $\sqrt[4]{3/4}$ m² u c
j gn{u| $\sqrt[4]{3/4}$ pk hgr $\sqrt[4]{3/4}$ vgrngv r $\sqrt[4]{3/4}$ vlc< o gi² tk o leuqf c ngj g/
vgv $\sqrt[4]{3/4}$ hgrfcvc x^a mcmu| qw c p² o gv² u c $\sqrt[4]{3/4}$ m j cf/
xg| gv u² i. co knqt c ukxcvi k^a vgr $\sqrt[4]{3/4}$ uv cnetv nigt /
u| cnqpl0

O kw^a p U| vgl p² n c| cpi qnm i² r r wnev $\sqrt[4]{3/4}$ g² u
c u| qo l $\sqrt[4]{3/4}$ i xku| c | vg c $\sqrt[4]{3/4}$ m eucrcvqnev. Gpxgt
grj cv^a tq| v. j qi { Dgn /f| ulc hgr $\sqrt[4]{3/4}$ m $\sqrt[4]{3/4}$ trk o gi^a v
 $\sqrt[4]{3/4}$ pkc| gm $\sqrt[4]{3/4}$ p² i gu qtq| /hcpelc/i { t v0

C| gi² u| $\sqrt[4]{3/4}$ m gt vctv $\sqrt[4]{3/4}$ m vj^a v^a v^a m $\sqrt[4]{3/4}$ fqw c
nev $\sqrt[4]{3/4}$ | wak hqpv $\sqrt[4]{3/4}$ C j gi {gm kw j^a tqo g| g $\sqrt[4]{3/4}$ u|^a |
o² vgt o ci cucn0 C h dd x^a tqum o kpv Gt| gtw .
n $\sqrt[4]{3/4}$ v| gt o² vgt o ci cu hppu $\sqrt[4]{3/4}$ hqnv $\sqrt[4]{3/4}$ hgm| gpgm j cv
u|^a | nkrqo² vgtg. xci { o² i o gu| gddtg ku xcp $\sqrt[4]{3/4}$ m
gi {o^a u $\sqrt[4]{3/4}$ nc xcu $\sqrt[4]{3/4}$ m $\sqrt[4]{3/4}$ u $\sqrt[4]{3/4}$ n0

C $\sqrt[4]{3/4}$ m hqpv o quv xci { jcvxcp nkrqo² vgtg

^anv c| qtqu|/v^{3/4}m jcv³tv»r0 K^v ukngt[~]Ä^v ku x²i tg c
 v³ o cf » qtqu| qnev o gi^a n¹cpk0 Gpxgtpgm c o gi^a n¹
 n¹u o ci c | qpdc^p ngx²u xqn< r^gpf Ä¹3/p eucm v³/
 o cf^a udc c v^{3/4}m ugtgi # J cuu^a p K| gv ruc. c n^ew/
 n¹| wuk j cf ugtgi rctceupqne. tg^a rku. u^a tc| go dgt
 xqrv² u o kpf c^pp{ku| qt xkuu| cu^Äi 3/p{3/4 v^g c u| gtcu|/
 n¹gtpgm< c| gn tgv^{3/4}2 u. c dg^a uqw^a n¹u qm¹»n o quv
 v² r¹ k¹ f gl² p. t[~]Ä^v m² i² u³/p i { km¹ u^a i 0

Gpxgt gttg o ci c kpf wv gn M^qpuvcp¹ p^a rqn{d»n
 j qi { u| go² n¹ gugg^p xgi {g^a v c rctceupqm^a i qv0 Fg/
 ego dgt j cvqf kn¹ p o gi² tng| gw Gt| gtwo dc0 K^v xg/
 |² tnetk h p³/n¹ pgm c p² o gv Dtq^puctv xqp Uej gm^gp/
 fqt^hpcm v^p^a eu^a tc o gi hqu| vqwc J cuu^a pv c j cf ug/
 tgi h rctceupqm^a i »r0 šP cr » r^gqp o » fl^a tc k^p v² | ng/
 fgw⁰ ô ¶¹ l^a m t » r c j cf v^{3/4} v² p² u| gn0 C u² f ¶¹. dg/
 jxc| qw jgi {i gtl^pegm^g p c v^{3/4}m n^evq^a m p{cnki
 dgu^Ä r r g f vgm c j » dc0 Qf chci {vcm o kgn w qtqu| qnev
 gi {a n^e r¹ p n¹ v j c wcm xqpc0 C| gi² u| j cf o xgrgv
 3; 360 fgego dgt v^k gpn¹ r^gpev n 3; 370 lcpw¹ t v¹ ki vt/
 vq< j wu| qp^{3/4} hqm xqrv pwr c r^ew0 K¹ u^a p ruc. c
 n¹ r^gpegf km j cf v^guv rctceupqne. gn| rgi c| v c d^{3/4} eu
 tgp^f gm^g |² uv cf v c nk j qi { c rgi² p{u² i n^ed^a vq² u
 j^a v^k u^a nqv j ci {lqp j^a tc. j qi { ¶¹ { n¹/pp{gddgp nk/
 n^geo gtgi lgp c j » d » r0 Gt^g fo² p{< K¹ u^a p gi² u| j cf/
 v^gug gr wu| wn0 C| qtqu| qm n¹/pp{ u| gttgn gr^hqi v¹ m
 c j cf v^guw^{3/4} | ugv ku² u c j^a tqo j cf qu| v¹ n¹ { v^{3/4} | un^e/
 t^a v ku0 Gpxgt cf l w^a pu^a pem c n¹ dckv co r w^a ipk ngn/
 rgw. o gtv gr^hci {vcm0 Gpxgt vi {cplu gr^gpf gm^g. j qi {
 v^k u| v^gk ku c n^evq^a m n^en o cu¹ | q| | cpen0 X² i Ä¹ ku c
 u^a | gl gt h p{ k n^ew n¹ | wuk j cf ugtgi d n p{ qn^excp^g | gt
 go dgt r wu| wv gn hci {² u² j u² i n¹/k^g v^g | v² dgp0
 Oquv o^a t eucm gi { x² tgu štgpeq^p vtg⁰ n^g m^g w c|
 qtqu| cn⁰ ² u c n^ew n¹ | wuk j cf ugtgi pgm^x i g xqn0

00 Gpxgtpgm x² i Ä¹ ku euw^a p v^k gpn¹ v^g | gt^{3/4} u^a |
 go dgtg o ctf v0 G| gm o gm^g w o ci c j gn{ gw rctceup/
 pqm^v n qvj ci {v c J ch^k J cmk dgl xg² tnetk gltg/
 fg^u 00 šC n^ev u| v » hc p{ k^x a p^q u^a i tc j q| cv^e r
 d^a to kn Ä¹ u^a i dcp. u v o² i c xgtg² i go n¹/² ug ku u| k/
 i qt Ä¹ cp v^k x^c xqn⁰ ô ¶¹ lc gi { km o ci cutepi Ä¹ nqt/
 v¹ tu Gpxgt ruc j cf l^a tvc w^a p0 Rgf ki gl c v¹ dqt/

pqm{« c ul 3/4gw²i gugn| gl vctv| qw0 C h x^atqudcp.
 c mvrkuul^a m o 3/4 3/4w gttg vgt o²u| gvgugp o gi kpf wv c
 ul go tgi^a p{^a uqm^a tcfvc< c v^{3/4}3/4m rctcpeupqnm c
 p²o gv rctcpeupqnm^{ev} j kd^a| vw³m ô gl gm xku qp v
 co c| qn^{ev}0 Nko^a p. cnk gr o q| f{^v uc grgp²tg ku V^{3/4}
 t^{3/4}mtul^a idcp o ctfv. Dtqpuctv v³dqtpqmv. c jcf/
 o xgrgv m vgtxg| l²v qmnc0 Gpxgt o ci c c| qpdc p
 c| gi²u| j^adqtÀ hqn{co^a p pgo x^amcn v^{3/4}dd² 3/4^am»
 rctcpeupqm^a iqv. gi {km htqpv| cneul qp ugo 0 Owu| /
 vhc Mgo^a n gffki o kpfki i { | gr o gu gmgphgr²pgm
 plo dwu| c cr r qucp o gi v²r^a | »f qw0

00 O g| qr qv³ o kc. c rgt| ulck htqpv. Gpxgt n^{3/4}
 xgvng| rt>d^a mql^a uc0 P go c v^{3/4}3/4m ngl f go² p { gl /
 v²m c f^{3/4}p²uv< kw c| cpi qnm f km³ r^a m c vgo r>>v0
 f vkw²m nevq^a kn^{ev} c Dcj tglp/ul ki gvgntg. qppcp
 r gfi rctvcul^a n{qw³ m ngv0 C| An^{3/4} gv c| cpi q/
 nm lcx^atc f iv gn²u gi { | kxcvtqu² llgrgp c v^{3/4}3/4m
 vt³gv j{gu mweugt flg< c Hqtv Hcw. Pci {dtkcp/
 pl² rgw0 M^{3/4}xgvng| km c o qj co o gtcj k An^{3/4} gv ô c
 v^{3/4}3/4m o gpgm³pgm< c| cpi qnm n³v j²v o An³xc
 f lcf cm cucp dgxqpwpem Dcu| qtcj dc. c| uk o q| /
 rko nk^{3/4} x^atqudc0 U| cdf c| Av c| cpi qnm ul^a o^atc
 hgrhgr² ku. c V^{3/4}3/4m Dktqf cmjo n^{3/4} gr g hgr²0 C Vki tku
²u Gvh^a vgu| gi {gu³u²pgm j gn{g. c| go dgtk²i u/
 d^{3/4}eu lg. rgw o quv c| cpi qnm v³ o cf^a u^a pcm d^a| kuc0
 C| Kpf kck[~] eg^a p>n c V^{3/4}3/4m Dktqf cmjo ul³k²ki rg/
 fki o^at pgo j quu| Ac| An00

G| w³p n^{3/4}xgvng| gw Owu| vhc c Mgo^a n i cnkr qrk f k/
 eu nercpflc0

00 C xk³i j^adqtÀ fg vcr³p c xk³i v^{3/4}v²pgrgo
 n²tf gngugdd. u v vcr³p gi {gf An³m» gugo² p {g xqnv
 c euqf^a re qu nevqpk gzr gf{ek». co gn{gv c šFctf c/
 pgn³ mqu²qo cõ p²xgp kuo gt c v^{3/4}v²pgrgo 0

3; 370 o^a tekwa v{ gpp{ qrecf kn³p. hw>v | n³pv vgt/
 lgv gn Mqpucpvp^a rqn{dcp c j{< c| gi {gu³ v cpi qn/
 hcepek hqwc dgp{qo wv c Fctf cpgn³ nlc² u n^{3/4} grg/
 f knc h x^atqu hgr²#

Mqpuvcpv^ar qn(dcp vgt²u|gvugp »t^kuk k|c/
nqo rgw^Àt^a0

C||cn o kpf gpnk u^ao qn. jqi { c| cpvcpv nk
cnetlc gt u|cnqpk c Fctfcpgn^anq^a c| ^av{qo wⁱu⁰
G| ²rgvⁱtf²u xqrv u^ao wntc< g| lgrgpvgw xqpc c|
³u| gn³vg²u o gi vgtgo v²u²v c u|³kgv²i gu qtqu| nq/
nqu| wucri⁰

C Fctfcpgn^am u|qtquc n³ak ³u| g c| Gi gk/vgpi gtv
c O^atx^ap{/vgpi gttgn⁰ Mgungp{. jquu| ^Ànep{cti » vgp/
i gtu|qtqu⁰ Gi {km qrf cⁱv Mk^a|uk. r qpvquddcp Cpc/
w^rkc. c o^auknev gi { jquu| ^Ànⁱu l²n|ki gv< I cnkr qrk
l³af p{grxg cmqvlc⁰ i { cmqvl^am c Fctfcpgn^am c
Dqu|rqtu| f²rk grp{^Àv hqn{v^vucn³pv. Gwt»rc ²u
f|uk jcv³tck⁰ C eucvqtpe o ci c g²i jquu| ^À= n³4^À
dgn^Àn jgwgp nkqo ²vgt= c ngi ngungp{gdd jgn{gp
c|qpdc⁰ o kpf³u| g g|gtp²i {u^a| o²vgt u²ngu⁰ M^À
n³pdgp c eucvqtpe v³ld jgn{gp gt ugp nku²nguf km²u
pci { o gf gpe²ngv cmqvl⁰ Xk²p^ancpf»cp gt u vgp/
i g^atco nⁱu²tg|j gv 0

C I cnkr qrk/l²n|ki gv c v^aekck u^atc| l³afd n p{^À
rk n k f²rtg⁰ G| ngu| Mgo^an jcfk²leu u²i²pgm nkpf wⁿ/
r qpvlc⁰ Kv hqtfwn o gi Gpxgt u|gtgpeugxqpcrc ²u Mg/
o^an gffk k gtgf o²p{vgrpu²i g⁰ Gpxgtpgm c j^adqt^À
dcp o quvcp»n hqi xc ugo o kugo ukngt^Àn ô Mgo^an/
pcmr gfk I cnkr qrk»c o kpf gp⁰

C fctfcpgn^ack vgi gtu|qtqu n²v rctv^av jqn gt u
jgi {xqpwcvm ô m^Àn³p³ugp c| ^a|ukck t²u|gp. ô
jqn rcrqu. i³4³4 ²u v³4³4m hrcncmⁿ qnllc/rki gvgmgn
i {^Ào ³4eu³4ungtvgmgn vrgu|»tv |³4f. vgt²ngp{ rc/
r^an{qm u|gi²n{g|kn⁰ M²vrf cⁱv ô m^Àn³p³ugp cj qn ³u|/
u|gu| m^Àn²u nep{ctqf km c u|qtqu. c| ut²i k gt f³4m
^ancpcn⁰

C| gt f¹vo²p{gm uqtc o kpf l^atv c| Gi gk/vgpi gt/
p²n c u|qtqu dgl^atev^ap^an ng|f fkn⁰ Kv c u|qtqu gt /
ugp nku²nguf km²u jcvcm cu |^Ài^auucn²uqf t^auucn
^atco rkndg c p{¹vvgpi gtdg⁰

C o^auqf km gt fuqt l>xcn dgrlgdd. c u|qtqu ngi ngu/
ngp{gdd t²u²p. Pci ctc v³l²n³p xcp⁰ Gt f. gt f
j^av³p. v¹ nkqo ²vgt jquu| ^Àr^ai dcp⁰ J gi {k gt f³4m

^ai {^Àm^auqm xgi {gugp0 C n²v gt feurqtv n³4 v pgo
xqncm c xk^ai j^adqtÀdcp ugo x²f^a n^auqm 2r^Ài { c
Pci ct^a »n vx^a dd 2u|cnpem c O^atx^ap{/v^gpi gtki ò
j^À »f». n³4^Àndgn^Àn jcto kpe³4 n²qo 2vgtgu eucvqtpc/
u|cneul qp ugo 0

Oci^av c xk^gv v^gpi gtk cnp^am x²f^vm= c| gt f³4m
gn w r g f k i v³4³4m eucvcj cl»m ô c šO guu| wf l²ô. c
Z šJ clt g f f l p Detdctquu| cõ. c t²i k j ¶tgu v^gpi gtk j u³4m
t n g p g x g | gw r^ape²nqu. x²i^Àn c šVqti w Tgku| ò ô
xqncm grt g l w g. c n k w i t ». n² d w m e n c v^gpi gtu| qtqudc
p{^Àn» n^glv u f qo d q m n³4 v 0 H k i { g r g o / g n g t g n^a n d c w²/
t k^am ku eucn^am c v^o c f » n e w 0 H P p { u | » t » m l^a t v^a m^a n
r p f » c p c x k^g v = x²i^Àn P c i c t^a p^a n g i { j c t o k p e o²/
v g t o² n { v g p i g t c r e w l^a t » / x²f x c u j^a n » |^a t v c g n c |
v g p i g t k n³4 n g n f² u 0 W u g f q o² u O g t v g u p² o g v c f /
o k^a r u q m x q n c m k w c v g p i g t k r c t c p e u p q n u m = N k o^a p
x q p U c p f g t u c p c i { u |^a o^a ^À u |^a t c | h³4 f k u g i² n { e u c r c v² 0
C | h g r c f c w m x q r v c | c p i q n m r e t v t e u |^a n^a u^a v o g i /
c n e f^a n { q | p k 0 C v³4³4m r c t c p e u p q m j c v^o u n³4 g l g r g p /
v² m g r g p x q n 0 P² o g v v u | v g m² u p² o g v x g | g² u c r e w
^a n u w k w o k p f g p 0

C u | q t q u e n u | g o d g p² u q r f c n v h g n x i³4³4 u | k^a
i g v g v c | c p c p v e u c r e w m o^a t c j^a d q t ^À g r g l² p o g i /
u |^a m^a n 0 O^a n c² u E k r t w u³4³4m c p i q n h q w c d^a | k u n² p v
u | q n i^a n 0 C | q t q u | h q w c i { g p i g u² i g o k e w² u | c n t » n
p g o w f q w v^o c f p k 0 | u | c n t » n l x g. c | g n u r q p v c |
g t u M q p u c p k^a r q n { x q n = c | q t q u | v³4 d g t g f o² p { /
v g r g p n² t r i g v w^a p x² t g u h g l l g n x q p w v x k u | c g w n c
n e r c p f » i 0

C | c p i q n j c l » m o q u v v g i^a v n k p p^a m p c m c j q u | /
u | ^À u | q t q u p. c p { ¶ i v v g p i g t g p 0

C | c p i q n v^o c f^a u v c | g n | v g o g i. j q i { x^a t e v /
r p w n o g i l g r g p v c |³4³4m² u c u | q t q u d g l^a t e v^a p^a n g i { /
g i { c p i q n e u c v c j c l » = t g r ^À n i² r g m k u v² t n² r g | v² m c
v g t² p w o q v ô g i { c p i q n v g p i g t c r e w l^a t » r g f k i x^a /
t e v r p w n h g n d w m e p v. o² i c p c i c t e k j^a n » p k p p g p 0 G p /
p g m v q t r g f » l c v g r k c i^a n e w c n² t v g c | k w^a m » v³4³4m

eucvcl>v. c| " tgi šO guu| wf l²vō P go uqñ^atc j gxgu
t^api^autc ngw hki {gm gu c pci ctck šj^an/ tu²i ð< gi {
Àcdd. o quv o^at htcpek v^gpi gtcw^at» o gi n¹u²/
tgn^g c| ^aw³/₄²uv o ci^ap c j^an»p ku šUcrj ktō/v c o gi /
u²t^an^v htcpek v^gpi gtcw^at»v. p²j^ap { n¹κ²u w^ap c
v³/₄³n¹mgñqi v^am²u u^atc| tc xqp^vnō

Oci c c pci { v^ao cf^au hgdtw^at o^auqf kn^ap ng| /
f f³/₄0 V^k/gpj cv cpi qn »tk^auk r^ape²qu. p²i { hcp/
ek²u gi { ngt^an¹ Æqp qf c²tng| gw qtqu| j cl>. c|
šCunqf ð. xqñv c| cpv^gh^gwc |³o g0

C| | i gk^vgpi gt hgn n hgdtw^at o^auqf kn^ap o gi lg/
ngpv p {qrē cpv^gv^ftgc^fpqwi j v²u j gxgugp d^qo d^a| pk
ng| f v^g c |^at>gt f³/₄0 Fg pgo wf v^c grj cni cwc^vpk c|
gt f^ai { Æk0 P go uqñ^atc Àcdd v¹ »tk^auj cl> lgrgpv
o gi 0 T³/₄κ^fgugp m/n¹κ³p pgo o ctf v c |^at>gt f /
d n00

C j^adqt^a o gi n^grv²ugl^ggm gi {kn^g. j qi { gddgp
c| »tk^auk^ai { Æ^ar qtdcp c v³/₄³n¹mpgm cñi xqñv u| g/
o²n^fk xgu| v^gu²i Æκ^a v^kgpp²i { j cñw o k^f3^ul g= v^k
| gpp {qrē ugdgu^an0

Ngil gddgp Mcppgpi lgu^gt²u Nko^ap r cūc
o qpf lc gn o k^v3⁴v²pvqx^a dd0

C| cpv^gv^jcl>m c |^at>gt f u²vtqo dñ^auc
w^ap o gi n¹u²tgn²m j qi { n^vqpcu^ai qv u^an¹ucp^{cm}
c rctvtc0 J gxgu n¹κ³/₄f³/₄²uagn ng| f f³/₄v gl c x^amen/
nq|^au0 C u| qtqu n¹v qf cñ^ap v³/₄dd gt u v³/₄³m j cf qu| /
v^an^f a m0

C| gi {km v³/₄³m j cf qu| v^an^f rctcpeupqñ< O wu| /
vchc Mgo^ar0

Gpxgt wi {cplu gn| n^gi x²i Æn ku o²i ku j c/
| cj kxcwc U| »h^ad>n O wu| vchc Mgo^an0 Xgu²n^fgu.
u| k^vg²ngxgu²n^fgu rqu| vt c j gn| gl v^g0 M^kpxgl v^g
c Fctf cpgn^anp^an^am» 3; 0 j cf qu| v^an^f rctcpeupq/
n^ax^a. c Fctf cpgn^anj q|. cj qx^a o k^fgp²r gu|
v³/₄³m go dgt c j c^vm cu cpv^gh^gwc pci {u| c/
d^au^a v^ao cf^au^av x^atw. Fg o²i gi {gv eugng^gf gw
o gi Gpxgt< dgqu| v^gwc c htcpek^dt^av Mgo^an^v Nko^ap
xqp Ucpf gtu p²o gv v^adqtpci { o gn². ô u v c p²o gv
v^u| v n¹4 xgv^gp u| go²n^fgu rctcpeupqñ^ai c cñ tgp/

f g n g 0 M g o ^a n n ² u d d o c i c k u o q p f l c . o g p p { k š n g /
o ² p { ³ / ⁴ u l g e u c r ^a u ō g u g w n ³ / ⁴ v [~] n 0

C o k f p v g i ^a v c | g i { g u [~] A n v c p w c p v e u c r c v q m r c t v /
t c u l ^a m ¹ u v n ¹ / ² t g r p g m o g i . c i c n k r q i k k ² u c p c h c t v c k
f q o d x q p w r c v q m g n g p . c ³ / ⁴ ³ / ⁴ m q i f c n q p O w u l v c h M g /
o ^a n c n ^a n c p c m u l g o d g p 0

C | ³ / ⁴ f ³ / ⁴ m ² u o k p f n ² v t ² u l t n t g w g p g v g u 0 C | c p /
v c p v e u c r c v q m v ³ o c f ^a u c c | q p d c p p g o l ^a t v u k n g t t g n 0
C ³ / ⁴ ³ / ⁴ m ³ / ⁴ m v c r q f v c v u g o g p i g f p g m = n g o ² p { g p ^a n ¹ a m
c j c t e q v c | g n u x q p c r e m o ³ / ⁴ ³ / ⁴ w M g o ^a n j c f q u l v ³ n /
r c t c p e u p q m k u u l c n e f c v r p w n l ^a t l c c x q p c r e n e v ² u
d k v c v r c t c p e u q i c v 0 C | g i { k m d g e u c r » f » h t c p e k
r w u n e i q n » v o c i ^a v k u g n c n ¹ r l c < m [~] A n ³ / ⁴ p ³ / ⁴ u u l g t g p e u ² /
l g c | q p d c p ô | u g d » t ^a l c h g h q i l c c n ³ / ⁴ g f ² n g v 0 C o k /
n q t M g o ^a n o g i o w c v c N k o ^a p x q p U c p f g t u p g m u l ² v
n w » t ^a l ^a v c | u c l ^a v ^a v p { A l c ^a v | c d q n ¹ v c p ³ / ⁴ ³ / ⁴ m
c n ¹ t g p f g n l ² p g n 0

00 C | v c j g n { g v c j q n c ³ / ⁴ ³ / ⁴ m ³ / ⁴ m q n j u k g u p ^a m /
v c m g n g p c | c p w c p v p { q o ^a u ^a p c m c o c k u š M g o c r i g t k ō
p c m p g x g l k n 0 O c i c c ³ / ⁴ ³ / ⁴ m j c f u g t g i n g i ² p { u ² i g n g l f /
v g ¹ { p g x g l p k g l v c | g o g m g f ² u v c o k n q t j ¹ g o g p v
c M g o ^a n l ² r g e u c r c v q m j u k u g n g p ^a m ¹ u ^a p c n 0

M ³ / ⁴ d g p M q p u c p v k ^a r q n { d e p p c i { t ² o [~] A n g v v ³ /
o c f v g t t g c j ¹ t g . j q i { c h q w c d g p { q o w v c u l q /
t q u d c 0 O q u v f g t [~] A n v e u c m n k j q i { o l e u q f c n ² v ² n
h g i { x g t . j c c n ³ / ⁴ ³ / ⁴ p u ² i g v v ³ l ² n u l c v r p w n j c i { l c c
e g p | A t c 0 J k ^a d c g t u n ³ / ⁴ ³ / ⁴ w c j k x c v r q u l g r g p v ² u v . j q i {
o ² i e u c m c n g i u l ² n u . n g i n g x ² u u ² h q p v q u v g p i g t k g t f
g u g w g n c u l ^a t c | h ³ / ⁴ f k e u c r c v q m u l k ¹ t f c p ^a n p c m ô
c h x ^a t q u d c p o ^a t w f p k x ² n ² m j q i { c | c p w c p v
h q w c o ^a u p c r o g i l g r p k m c h x ^a t q u g n w ² u d q o d ^a | /
p k h q i l c M q p u c p v k ^a r q n { v 0 C o ^a u m [~] A n ³ / ⁴ p d g p o ² i c
j ^a d q t A u p { q o q t A u ^a i g n g p ² t g k u r g l u i x k ¹ i x ^a t q u k
² r g v g v ² n . o k r k e u u l ² m x ^a t q u ² r g v g o g i d ² p w n c n ¹ t
e u c m c D k ^a p e g h q i n c n ¹ u ^a v o g i g n | p e r q m A n w c m
x q p c n 0 C u l » t c n u l » j g n { g m ² w g t o g m n ¹ x ² j ^a | c m
u ¹ p j ^a | c m o q i » n ¹ r u l ¹ p j ^a | c m * x q n v o ^a t c m n q t k u
x c i { v ¹ | d g n n [~] A n m d g l ^a t v c m x c i { A t g u p ² | v ² t g n w
l ³ u l q w c n 0 H q n u l v c | c x c t v . g i { h ³ / ⁴ ³ / ⁴ u n g i g u n q t /
o ^a p { k p v ² | n g f ² u c e u w r c » x c v q u ^a i d » n o g i n g l f v ² m c

h x^atqu nk^Ä¶²u²# C ul wⁿpⁿpk wf xct. c nqto^ap{. c
o lpu²tkwo qm h jkxcwqm c| kf gi gp n³kgu²i gm
dgeuqo ci qncm j qi { ^aw³n³¶ | gpgm c dgrlgdd. Mku/
^a|uk^adcp rxx Gu nk Ugi ktdg0 U^a|u^ao tc xqpwn^acm c
v^xgn^atcx^apqm cw»m nqeukn jkxcw^aqnm cnku/ |
vgm hgn^Ä {grvg c^aw dÄ^aqttn ^anco k rxx²n³temen
ft^ai cu^ai qmen o Ä^agwo qm nkpeugkxgn n³4i { lvg0²/
p{gmgn c Rt»l²v²u vgo riqo qm go r²m³ti {ckxcn
c| qtu^ai Ä^aqp0

C r^apkncm c| ³4gi X0 Oqj co gf ul wⁿpⁿ gt²/
n³gu²u d^avt grj c³vtq^auc xgvv x²i gw0 C nerkc
o gi w^avc c fqi qv²u gi {ul gt gp nkgrgpvgw< pgo
j ci {lc gn c h x^atqu0 Cnk l²n o gpgn^Ä¶³p0 dk qp{
pgo o gpgn^Ä0

C| ³4gi ul wⁿpⁿ ul go²n³gu d^avtu^ai c l» j c³v²u/
ucn xqiv c n^aqu^ai tc0 Uqncp xku| chqtf wncm c o^at/
o^at kpf w»m n³4 Ä0 T³4vgn²m nkuj kv u²i Äng0 C hgn/
|cm^avw x^atqu r^aucp Ätc o gi o gtgxgf gw= o q| fw
r^avcp k i cm³o dcp x^atv c j ¶³gnv0

G| c^aw c| cpi qnm o gi ngl f²m Äqppcp²tng/
| gwj ctekgi {u²i gk^amf³p^av d^axgv²u²0

C| cpwcpv^hqwc v³o cf^auc c eucvtp^adc gi {tg
vct0 J gvm »v rt>d^amq| pcm o^at c v^api gt²ul gm²u c
j cl>n^app ul^an³¶qw j kpf w. um»v. htcpek²u cw^avt^ark
i {cm^aiqum n³q^arcw rctvcu^ampk0 Mgo^an²u Nk/
o^ap xqp Ucpf^agtu eucrcvk j ulgugp gmgp^ampcm vq/
x^addtc ku. C v³4³n³¶m c| qpdc n³r vrgpgm o gi c^anf^a/
n³q| pk j qi { c| cpi qnm xg|²tj cl»lc. c šS wggp Gik c/
dgy õ. j cto k^aep{qre egp^ako²vgtgu »tk^au Ägi gkxgn gn/
n ll³p c| gi²ul l²n³| ki gv l³4³v²u o²i c dgrlgdd hgnx
v³4³n³ h^arcnev ku v³¶ntgdqo d^a|| c0 ~ tk^au cpi qn dcm/
p^aq^app o gi h^ai {gn vku vgm tgr Än i²r gm k^ap{ ¶³qw^am c
vÄ^agr²u0 C v³4³n³¶m cm^apcu^agf²ug c v^api gtgp. n³4 dgp
^ampf »cp hq^akn0 C v³4³n³¶m | cxct» j w^ao qmen ku
rt>d^an^am c| cpi qn j cl>m²u Ägi gm ft>v²mÄk²tkp/
ng|²u²v | cxctpk ô fg ngx²u ukngtgr0 Gpxgt n³u²i/
dggugwgp wc| km nk ul go²n³gugp o ci^axen c| co g^atk/
n^ack n³kgwn ô Co g^atkne o²i pgo^am j cf dcp ô Ot0

O qti gpj cwxcn c ul qtqudc < nřtk o ci {ct^a||c pgnk
 p²||g o gi ²u m³v³/4lg xkřii^a c j¹v< plpeu o²i
 xgu| xg V³/4³nqtu|^ai# K gffkp jgtegi. c v> p³/4³nřu ku
^amcpf»cp qw xcp. nřmgu¹kk c x²f ngv. dgu²ni gv c
 nęvp^amci#

X²i tg hękktcf c f³/pv ³Änř³4 gvperlc0

Tgi ign v¹ »tc hęř. i {³p{³/4 . vku| v kf dgp. per/
 u³v²udgp o gi lgrgpkn c| cpwcpv/hqwc0 Gn n c| cpi qn
 euqrqt v j cřf0 J²v pci { ftgcfpqwi j v gi { uqt vqt/
 r g f »tqo dqn» ²u nřugdd r^ape²nqu nř¹u²tg^v2dgp0 O quv
 ul ³Äp v nř³4gvng| km o clf c ltcpekc hqwc l³/p0 C vt/
 vřm j cl»jcf gl cřw c eucvqtpc dgl^atcv^ap^an o c/
 tcf v< wi {cpeucm j²v pci { cpi qn r^ape²nqu0 F²řgn w
 vř gpgi { »tc hęř n^vxqrdc ²t c| ²ř p j cřf » cpi qn
 hqwc ²u o gi p{klc c v³Ä gv ô o²i o kř ki »t^kuk v³/
 xqn^ai d»ř0 C v³/4³m gt f³/m ego gpv ²u r^ape²nqtp{ckp
 |^ar qtnřpv j wřpcm c| cpi qn ce²ni^ap^avqn0 Mgo^an
²u ři²p{gk^am^am c uctc0 C j qx^a ngv c j cte gřl²p
 xg|²p{gn²m qw^amcpm o quv ku0 C| cpi qn j cl»m w^ap.
 hęř^atm| pcm c ltcpekc j cl»m ku0 m ku n pk nř| f gpgn0
 Gi {o^auw^ap l³/ppgm ul²r gp. ²nřcřndcp. gi {o^auw»n
 gn v¹uqu v³xqn^ai tc0 C| gi²ul hqwc Ä { j cřf.
 o kř j c eucm xrcro kř gp uqw j co r vqpk i {cnytrvc
 tgp f gng xqpc nk ngv c nk^an(0 C| v³p. co knqt n^v/
 xqrdc ²tpgm gng| f gpgm nř³/4³pk0 Co kpv^amcpf » nř³/
 t³/ndgp gřqpwpcm c v³/4³m gt f³/m gn w j k j gvngp
 i {qtucp nřcf^am c nř³/4²ugkng0 C| »t^kuk hrcncuci
 dgvqvqtp{qm eucm Ä { f Äd³/4³pgm tqddeppcm c rct/
 vq p0 C| v³p c| gn n ř x j cl»m Ätc gn^axqřfpcm^av
 cf^am j gn{gkngv c nř³4gvng| nřgn0 J^av^add c| v³p
 Ätc v³/vpgm ²u Ä dg^anř¹v ucn Ätc n pgm ô c|
 gn ř m» j cl»m nř o²p{gk h³/4³w. Mgo^an ²u ři²p{gk
 uqtcknř³4²0

(0) O^auh²n »t^aki | gpi c rqnqn c| gt fxqpcn h³/
 nř³/w0 Gmqt p²i { . gffki c o^auqf km uqtdep hękqpww
 ltcpekc j cf k j cl» m³ř³p x^ařkm ²u gi²ul nř³4 gn c v³/4³m
^ai { Äm |^at»v³Ä²dg o gt²ul nřf km gn tg. j qi { f³/pv euc/
 r^auv o²tlgp c v³/4³nř³4ntg0 G| gm c j cf k j cl»m gffki c
 ři pgj g| gdd v³/4³m p²o gv i t^ap^aw³Ä gv ku ul kř tf cp^am
 v³m o^at f²řk nř v »tc xqř. co knqt x²i tg xgu| vgu²/

i gkm qnf pci {qm rvgm j qi { o gi nmgw hqtf wplqn0
 Mv »tk uk hcpck ftgcfpqw j v c šDqwxgō 2u c
 šI cwqkuō. crki d[¶]v[¶]m o^at gmq^t o ci wnev xqpu| qn/
 pl0 Xcn^ui qu ce²rtqo j cm c| qm xqncm o²i 2n. p²/
 j^ap { go dgt^{Amgn} hgf²ñ gv^{Am}4p. r^ape²nqtp { ckn^lcp0
 Oknqt o^at o clf pgo n^vxqmp n[¶]Am²tv^{gm} gi { vgrk/
 vñ^{nev} o²i dgrgeuc^{rw} c šDqwxgō/pgm²rrgp c n/
 ul gtn^{eo} t^al^adc0 C j cl» c| qppen hgtqddcp0 C šI cw/
 mkuō r g f k i pgo uqñ^{tc} c rctv n⁴xgv^{gp} n⁴gr²dgp. c|
 Āi {pgxg| gw šP {Āu| ki gvp²ñ gnu^{Am}gf v. »tk uk xlj c/
 tqun^{excti} a ucr0

C| cpi qnm c| qdcp pgo tkcfpcm xku| c0 Hgn/
 xqpw c| g f f k i š r k j gplō/dgp^amqw. o^auqf km cpi qn vct/
 vñ^{nhqwc} ku0 Eucm o quv kpf wn gn c| ki c| k j c f f g j c f f #
 Okp j c c i { g j g p p c 3/4u| gu xkn^o c gi { u| g t t g euc^{pc}
 j cl>dc. gt fdg gi { ct^apv# C v⁴3/4n⁴mpgm l>kf gi | gv
 v^Ā2tgkm 2u »tk uk ul gtgpeu²l^{Am} xcp< c| šKtgu^{ukd}/
 rō 2u c| šQegcpō ul kpv^g gi { u| g t t g n^{er} gi { /gi {
 »tk^audqo d^av c i²rj^a|^adc< c| a n^{ci}pqu 2i | gpi²u n⁴/
 | grgwg gi { u| g t t g eucm o kpf ngw r^am ô d²pwncp.
 o q| f w^{vc}wpwn xgu| vgi gn c p { ¶^{iv} xk| gp0 C v⁴3/4n⁴m
 o quv o^at rqpvcup dgr⁴xkm rctv^ai { Ānev. ô c
 n²v j cl>pcm x²i g0 G^{rk}gu| vñ0 O²i c| per²llgn vrdgugp
 x[¶] cr[¶] ngt^{Am}gn0 C o²n { x[¶] vgi gtu| qtqu rgu| c u[¶]/
 lwn0

C v⁴ddk cpi qn j cl> ku u^{Am} { qu u²t^{Am} ugnv ul gpxgf0
 C j cl>m dk^qqu r wu| wñ^{uc} p²m^{Am} r g f k i pgo r g j g v
 vctv^{pke} htqpv0

P²i { »tc jcto kpe r g t e n q t c | gi { gu^{Am} hqwc
 o gi hqtf wn 2u o gi ng| f k t g p f d g p c n^xqpwñ^u v c Fct/
 fcpgnnd»r0 C rctvq^am Mgo^an n^{ev}q^am 3/43/0 v n
 l²n t^{Am}gp f q d^a n^am h g | g k n g v. r w u n^l k n e v c r g x g i d g 00
 O^at pgo ku n pgm eucm qtf[¶]q| pcm²rlgpg| pgn00
 C h x^atqu. c| k o^af q w M q p u c p v k^a r q n^l. o gi o g p g /
 m^{Am}#

P²i { cpvcpv j cl> gnu^{Am}gf v. j cv v⁴pntgo gpv 2u
 j qu| Ā j »per qntc lcx[¶]» f q n m d c n g t^{Am}0 C v⁴3/4n⁴m
 c| qdcp vrdgu j^adqt^{Am} o w[¶]ekⁿñ u| r v^{Am} gi { j c t o c /
 f^av g m w²n0

C h x^atqudcp gu²tg lww gn c i { | grgo j f g 0 C
 n³/₄v /u| w³p. X0 O qj co gf. ³/₄³/₀ ²dgp xgtugv f c
³/₄³/_m j c | cu | gtgvv fleu f²u²tg= c rcrqm o^aupcr
 n³/₄rk m c n³/₄ngo²p { v 0 C ³/₄³/_m h x^atqu o qj co gf^ap
 renqu^ai c t²i pgo xqrv kn { gp i { | gro k o^ao qtdep.
 o kpv g | gp c | ²llgrgp 0 C ngtgu | v²p { ngtgungf pgi { g/
 f gndgp c | qpdcp gi²u | <²llgn²i pgmc u | qo qtAn^o r^an^o

C | cpi qn²u htcpekc eucrcvqm o quv u^atc | h³/₄f³/_p
 n³/₄f²trgv | pgm vx^add0 Mgo^an²u go dgtgk À l r qm qv
^am p c m n^o F g c i { | grgo c | ³/_x²n^o C | cpvcpeucrc/
 vmpcm nkrpej »pcr qu nkctv» m³/₄fgrgo w³p ugo uk
 ngtAnvgrlwpkqmc V³/₄³/_mDktqf crjo u | f²k^o

Nlo^ap xqp Ucpf gtu²u Mgo^an o kpf gp ngj gv v gn
 n³/₄xgwgm ô²u j q | |^a gtgfo²p { gupg ô j qi { »t^kuk
 u^ao À ³/₄³/_m eucrcvqnev^a n³/₄j cuucpcm u | go dg c |
 cpi qm m e n 0 Co k kw ³/₄v²pv. c | o kpf n³v t²u | t n
 vku | v ³/₀ gi o²u^atr^u xqn^o X²i An ku o²i ugo gugw
 gn j^kdc ³/_xgp³/₄g | gt ³/₄³/_m²u ngw jcten³r vgrpp²
 n³v u^a | g | gt o^aukn³ ukngtAnv hgnctv» | vcpk c u^atc | /
 h³/₄f k cpvcpv | tqj co qv 0 G | gnpgm c jcteqn p c m o quv
 o^at xkc v j c v p j ug Owu | vhc Mgo^an g / t g f g u ku 0
 .. u^a | ³/_xgp | gt cpi qn²u htcpekc^a nqw kw u | go dgp
 c ³/₄³/₄m gr 0 Mgo^an c | v³ p gi { u²r perqp gi { u | g/
 t gp pgo cnctv j kpk c u | go²pgm co knqt per hgn
 ngnv w³p. c | gwt » rck x²ttgn qn { uqⁿ vctvqw. cp/
 vpv o gi u^a nqw^a rctvk euf³nv ô Àtgugp v³n³nc#
 Okpf³uu | g j cv nkqo²vt xqrv g | c t²i » v vctvqw cp/
 vpv o gi u^a nqw c euf³n 0 Kv^a m c m c x³/₄i { dgp c | cp/
 vpeucrcvqm qf chgpp Mgo^ar³n 0 C | cpvcpv j cf xg | g/
 v u²i kf xgn dgr³vc c x²t^ar f q | cv j^kdcx³en³u^ai^av 0
 Vgrigu eugpfdgp²u vskndcp gi { km²llgn nk³ f gwg c
 jgxgp { ²u | gw^atnqnev. ^am³uqnev. tgpigvi nup | gtxgv.
²ngm gv. u^a vcv j c i { v m c | qpdcp j^a v c 0 C o gpgm³/₄
 r³u | gt i { qtucu^a i tc ku u | An²i xqn= o gtv j c Mgo^a/
 r³m²u | tgxgu km c dgj c l » |^auv. c xk | gp Àtc ³/_{pntgr}/₄
 xkc c fgtgi n²ngv 0 Rgf ki. j c c | cpi qm w³ v^a m xqpc <
 j qi { o kpf g | cmqt ³/₄v²pv. co knqt o^at xqp Hcn/
 ngpj c | p p²o gv³/₄³/_m i gpgt^a rku u³ti ³/_p { kgi n³tv.

gi {gpgugp Xkro qu eu^au^at p_{gx}²dgp. jqi { c v^{3/4}m nqt/
o^ap { c| qppcn m^ñf lg gn jgn⁽²t n c o²i o kpfki v^{3/4}m
j cfugtgi dgp ul qri^an²u c Fctfcp_{gn}/j cfo xgrgv/
ngv xgl gv Nlo^ap xqp Ucpf_{gtu} o ctucm. o gtv šx²/
f gngl² ukvcnk^ñ lc gr^ñi vgrp⁰⁰⁰

i { x²i | f^{3/4}v vj^av c i cnk^ñ qnk j cñ^ñ m^ñ f gno
cpi q_{qm} htcpek^am²u v^{3/4}m^ñ n^ñ4 v0 | u kw f n_v gn
vñ^ñp c n_{je}n_c x²i n^ñrr Gpxgt²u Mgo^an n^ñ4^{3/4}v ku<
o gtv c n_ewñ^ñ| wuk n_ercpf w^ap Gpxgt qn⁽cp p²r ul g/
t vgp ngw jqi { o²i ul p^ñj^a| k r^aj qn^adcp ku t^an w
xcro k j c| ch_{cu} v^{3/4}m f^kn⁰ Mgo^an p_{gx}²v xku| qpv I cñ^ñ
rk^ñ qrk w^ap gi²ul V^{3/4}m nqtul^ai o gi kuo gtvg⁰ C v^{3/4}m
pgo | gv vku| vgp_k ng^ñ fvg O wu| vhc Mgo^an p_{gx}²v ô
²u ul²i { gprgp_k Gpxgt r_{cuc}. c vgi p_{cr} j u²p_{gm} gr_{ngl}/
vgw^f leu u²i²v0

ZK0Mgo^anc/ ²ng v^{3/4}0

Gpxgt²u xgrg gi { ãw c v^{3/4}m eu^au^atu^ai j cñ^ñ
m^ñ f gno g 3; 3: grl²p xgu| k ng^ñ f g^vv0 Fg o²i j quu| Æ
gu| vgp^f nki hqi gnctv_{pk} co p^ñ gl c n^ñv^{3/4}u| gp w
dgvⁱ a mcp^f »cp²ng^v²u j cñ^ñ n^ñ4 vrgdgi 0

Pci { U q_{ro} a^p dktq_{fcm} c pgo uq^ñtc x²i n^ñr gn
hqi v p_{pk} Gw[»]r_c v^ñtn^ñr²t r⁰ Fg gl v eucm O wu| vhc
Mgo^an n^ñlc n^ñvq_{nk} ul go g_{lxgn} ô Gpxgt pgo 0^{..}v
o quv j_{ky}grp r_{rk}k_{nek}²u n_evq_{pk} xcm^ai i cn xgtv
o gi C_mj 0 C| gi { nqt qn⁽ j cv_{ro} cu V^{3/4}m Dktq_fc/
mqo x²i n^ñr nku| qtwn Gw[»]r^ad[»]n ô xku| c c| qndc c|
uk j cv^aqndc. co gn⁽gn^ñ n gi { nqt. v^{3/4}dd. o kv^ñ l^ñ
gl gt gu| vgp^f xgn gl gn w gr_{kp}w^ñ0 C j cl_fcp^adcp hgn^ñ
ul p^ñxqw p { vi cv^k a^mco qm ngul cñ^fa^up_{cm} hñ⁽co cv
x²i g^vt0 | u o gi kv^ñ dgdk^ñ qp { quq^f km jqi { c l^ñm c
v^{3/4}v² pgrgo dgp ugo p p_{gm}c |²i ki 0

Ugo J c_{ppk}^an ugo T[»]o c. ugo F | ul_{pi} ku| nj^ap.
ugo c J c_{du}dwi qm ugo P_{cr}»r_{gp} j[»]f^ñ u^av pgo
v_{tj}cw^am o gi c | w[»]f_{qn}0 Vcñ^ñp²rrgp c |²tv ku. o gtv
n_{qto} a^p { |^auwm vku| v^ap c | gt ul c_nup. fg pgo g_{tn}ñ^ñek
gr_{kg}np p { vi q_fq_w0 Xcm^auqm v_pqm xk^ñi p²| g_{gm} xk

u| qp v vñ p ² r r g p g l ² t v ² a m p c m h g p p ô c j c v c m q o o c n
g m g p v ² v d g p ô u l ² | c f q n u p . ² x g l t g f g m g p ² a v 0

C x l j c t n q t d ² a e u q n c j v n f o q n d » n g l g n d g p c p c i {
k f m d g p Ā l g o d g t n r g v p k m h g r 0 G i { g o d g t ² . c n k /
d n n f u d d V ³ / ⁴ m q t u l ² a i p g o | g k j u g ² u Ā l ² a c m u /
w l c r u l 0 T g p f n f x Ā k m c n r g u a ² i g k ² u » t k ² a u k c u l g /
t g p e u ² l g 0 G i { ² d n r p v ô c o k p v c p ² o g v o q p f ² a u v c t v /
l c ô g i { ² p k w r c l f q p u ² i c u l g t g p e u g k u 0 Š I n Ā e m k u v
g o g G k i g p u e j c h d 0

O q u v o ² t O w u l v c h c M g o ² a n r c u ² p c m j f x l ² a m g l v c
l ² t h k Ā 0 C v ³ / ⁴ m v ³ / ⁴ v ² p g r g o d g p c t ² i g d d k f k m ² v q t l g /
r ³ / ⁴ m g m o k p f d c n u t u ² a r f q l c v k x ² a r g w g n 0 M g o ² a n c l q p /
d c p o q u v o ² t ô I c n k r q r k w ² p ô o k p f k i c l » u l g /
t g p e u g n r p { g l v g w i { g t o g n g o c t c f 0 P c l k o r c u c
² u O c j o w f U g h n g v o c i c u t c r g p f Ā n n e t t k g t l ² p g m o g /
t ² p { n i q n » l c x g w g x ² i g v 0 C j c t o c f k m p ² r d ² a r k ² a p { .
G p x g t . e u ² u ² a t k j ² a | c u a ² i c w ² p g i { x g u l v g w j ² a d q t Ā
d c n l g t g p e u ² l ² d g . x g u l v g w g n p ² r u l g t u ² i ² v 0 O w u l /
v c h c M g o ² a n c l q p d c p g m g t Ā k c d c n l g t g p e u ² v . c o g n f
² r r g p g r i u l g t k ² a p { w v g f f k i g m g p g < o k p f x ² i k i p g o /
| g k j u . c j ² a d q t Ā d c p j c r f r u c p n k f ² t c f v p g o | g v
d ² a r k ² a p { c . c š v ³ / ⁴ m p ² r c v l c o r u l 0 G m g p u ² i g k g i { t g
h q i { p c m = v ² d q t c g i { t g p q . c o f l x ² i t g r u l c f k m l
v ² q t . c l Ā l ² a v t g o v . c l ² a n c o c v l c . c n k p g m n a r q t /
w l c o g m g w g i { q t u l ² a i n r ² p p { g k h q i p c m q o r c p k 0

Ⓜ G i { g n t g O w u l v c h c M g o ² a n g l t g f g u . c l Ā
r c u c . 3 ; 3 : / d c p o ² i e u c m g i { k n g c l q n p c m c l g r g p v /
u g d d v ³ / ⁴ m v u l v g n p g m c n k n p g m p c i { n e t t k g t v l » u q n
p c n 0 M g o ² a n c F c t f c p g n ² n p ² a n j u k g u p n k v ² p v g w o c /
i ² a v 0 U l g t g p e u ² l g o q u v o ² t ² a m p f » c r ² t g u l v g p f
c r c w c r g l t g f g u . g l t g f g u . r c u c ² u v ² d q t p q m r u l 0 K c l .
j ² a d q t Ā x c p < c v u l v g m m Ā n ² p ³ / ⁴ u g p c x g l ² t n e t . i { q t /
u c p r r v g m g n 0 C v ³ / ⁴ m x g l g v n t g c u t r p g m ² r Ā i {
| v j q i q w c x k f i j ² a d q t Ā d c p . o k p v w ² p c c d c d ² t 0 M g /
o ² a n I c n k r q r k ² a n r g w k u o g t v u l g o ² n k u ² i 0 G i { ² d n r p v
p g o e u c m h k g v ² u g . f g x c i { q p c k u g o g m g f k n 0 M k v p
n » u l c n r ² t v r ² v ² t g ô o k p v c p p { k o ² a u v v u l v ô n » n g /

tgungf²uugn ku hqi rcmaj| kn0 šTcf| uk rcnõ. vku| v cted.
 ..o gflekpc/x²t õ nqxcmen ngtgungfgw0 Xci {qpc xcp
 o quv o^at ô n^{3/4}AndgnAn ul^a| gl| gt o^atnc²t^vndgp ô
 gl| v ku gdd n c t²i»v |^{3/4}v hqi rcmaj|^aud»n ul| gtgl| vgo
 Grpxgtgn gi {gn tg o²i pgo ngtAnv ngp{²t^v^{3/4}utg c
 uqt0 U v Gpxgt ul| go o gn^avj cw»rci ki {gml| km l»dcp
 ngppk c| À j uugn0 Mgo^an xk^ai qucp n^av c gl| v²u²t| k
 c o^aukm i {gpi gu²i²v0 C p²o gvngv Mgo^an o quv ugo
 ul| gtgwg ô ¶i { vj^av o gi rgr gv²ul^ao dc o gpv ul^a/
 pk²tc. co knqt c i {gpi An r q| ¶ek»lÀ Gpxgt 3; 3: gr/
 l²p šd²ngn^{3/4}xgvõ mAn^a j q| |^a. c| |cn c n²t²uugn gn
 n²l²tpg/g gi {km dgqu| vqw vku| n²pv Xcj kf gfflp Gh
 hgpfkv c| À v»p^{3/4}^{3/4}^{3/4} hgpu²i²v. ô Kgf fkp jgt/
 egi pgo t²i x^atcvcpwn o gi jcnv ô c vgtxgl| gw p²/
 o gvqtul^ai kwcl^autcA

Mqpuvcpv^ar qn| dcp gmnqt| dcp²rr ul| wn^apv vq/
 o gwn0 Pgo c| wcmajf»v. jcpgo c fgtqpk^ancv0
 C Dqu| rqtul| nku^a| ulck rctv^ap^am». o ci^apqu hgt²t
 rcrq^adcp jcnv o gi c| ^{3/4}gi K0 Cdf vn J co kf ul| wn^ap0
 Mkrpe jqu| À²xgv v^{3/4}^{3/4}^{3/4} v^{3/4}kpvt^anm^ai dcp0 Xci {qp^a/
 pcm o ctcfx^ap{ckv. Gw»r^adcp vknqu pngxm crcw ng/
 | gnv dg²v²p{ xgk. o knk»u^{3/4}ul| gi gngv. o²i²rg²dgp
 c pgo | gvgmcl^apf²nq| vc0

C| gz/ul| wn^ap. cnk ko o^at v^{3/4}v²pgno k ul| go²n{k/
 t²i² x^anv. »t^kuk f¶ul| gu vgo gv²uv²u mAn^{3/4}p pgo | gk
 v²td²/v. o cw| »ngwo qv ner qv0 C vgo gv²uk o gpgv²r²p
 qw jcnfv Gpxgt. cnk gi {nqt c| grj cnv ul| wn^apv o gi/
 hqu| vqwc v»p^{1a}»t0 Gpxgt o quv o^at ki {gml| km o kp/
 fgp t²vgi i gn|»dcp ngppk0

00 C h x^atqudcp c| v^ap Gpxgt ul| go²n{gugp dg/
 ul²ng o gi Mgo^amcn c xkf²nk jcf qu| v^an{/v^adqtpqm/
 mcn c p²o gv h jcf kul^an^auqp x²i| gpf rqrkknck o ku/
 ul| » t²ul| ngv²k0 Gpxgt ul| go o gn n^avj cw»rci c| v tg/
 o²ng. jqi { Mgo^anv ukngtAn rnxgpplg n^ad^at»t0 Mgo^an
 dct^au^ai qu xqnv²u ul| qn^arcv^aul| < ugo^atwnc gn
 o gpp{ktg i { n²ak c o^aukncv0 C o gi dgul²r²u w^ap
 dct^au^ai dcp x^ancm gn gi {o^au»t0 O quv pgo r wul| v
 tgrtg| gp^an^aut»n xcp ul| »0 P²o gvqtul^ai dc hqvqu fqn/
 i qm o lew wc| qw Xcj kf gfflp v»p^{3/4}^{3/4}^{3/4}. cnk gnu
 kn| gp An^av n²v²xxgn gl| gn w D²eudg. Hgtgpe L| ugh

qu^a m eu^a u^a t² u o ci { ct nk^a n^l vgo gv² u² tg vgw
 o gi 0 O gi ngnw xqpc wf pk fkr qo cvkwu dgu² i g/
 v² ugm uqt^a p < j qi { cp ku^a m wrcf qpnr gp c u^{3/4} kv
 u² i g u m u² p^a lcA O km c rgi n^{3/4} grddk p² o gv vgt xgmA
 Okv j clrcpf » P² o gvqtu^a i^a r f q l pk² u xcp/g gi {^a n^l
 vnr p nk^{gr} xg l gv Àv c l gi {tg u l qtqucdd^a x^a n» cp/
 vcpvi { t d n0 G l u^À i u xqnv o gtv c nk^o gt^À v V^{3/4}
 t^{3/4} nqtu^a i n^{3/4} x² rgo² p {g u Àcddcp o^a t c rgi v^{3/4} dd r q/
 rsknwu ku pci {qp nk^l x^a p nq l qw c j^a dqt Àd» n0 C l cp/
 vcpv tgr^À n i² r gm o nk^o u^a o tc f qd^a ncm r g c l^{3/4} u l gu
 hqpvqu ncvpck r qpv nq p c m^À v^{3/4} p d^{3/4} p {grk dtqu^À
 t^a ncv ŠO R tv j cteq nqm v^{3/4} n^{3/4} m o² i o quv ku nk/
 n^l v^l ucr pwn kf gi gp² t f g n g n^l tv^À C m^À v^{3/4} f^{3/4} p cwc/
 u² unqf qw. htcpek j cfi {cnqtrevq p ku t² u l xgw Mg/
 o^a k li gp l» u l go tgh tgpug rgu l c xcn» f k j gn l g v p gm
² u gl c l Àv ettc ku l» rgu l. j qi {j c v² p {r gi xcp o² i
 p² o gv gt vctv r n^l j^a v r^a uuc gl v i { | fl² m o gi t» n
 u l go² n l gup0

Dk qp {qu < Gpxgt pgo u l gtgw g Mgo^a n. co kv c l
 ugo u l gtgw v0 F g c l ku dk qp {qu < c l Gpxgt ngl f g/
 o² p {gl v g nk² m^À v² u² t f g n^l dgp^a n v o kv n g w l^À n p gn0
 Gpxgt c l | cn c l² t² ugn d^À eu^À q w gn t² i k tk^a rk^l v» n
 j qi { ukngt^À v gi { pci {u l gt g n g p h r^l v ugo r gi gu^l g/
 plg0 Mgo^a n r g f li wf v < Gpxgt o² i g r i j cvm cu
 c j j q l . j qi {^a v j cuuq p pgnk j c cnet0

Mgo^a n² u Xc j kf g f f kp. cnkd n pgo uqn^l tc XIO O q/
 j co gf u l w n³ p² u V^{3/4} nqtu^a i wqn» eu^a u^a tc rgu l .
 c p² o gvqtu^a i k wc^a u gn w kuo gtn g f v gm^{3/4} u l g0 C l
 À v » p^{3/4} n^{3/4} u. X0 O q j co gf r gi h c v r c d d h k² tg xqn0
 Mgo^a n o ci c q l { o qp f lc gnkuo gtn g f² u^À m v^{3/4} v² p g v² <

ô Gi { pci { u l cm p dc xg l gw gm d g p p^À n g v0 C
 vgtgo dgp cted u l p {gi gm gi { f k^a p² u n^l v u l² m xqn0
 G l g p n^l k^À n t g p i g v i . h n g v g . j q u l À n c d^a v q u À^a n f q /
 i^a n v c j gn l k² i dgp0 O k n^{3/4} dgp o k ku q w^a n f q i^a n w p m
 P c f | uk v^a d q t p q m n n² u x^a t w p m o² i gi { j cuq p n^{3/4} /
 v^{3/4} gv À l g r g p v o gi . cnk n pgo wf w m j qi { nk/
 euqf c² u j qi { o kv cnet0 Eucm c v^{3/4} d d k h n g v g u l cm p /

nēd^a v xlugmgf²u²p n¹wm c|v³p. jqi { g| c| Àt Xc/
j kf gffkp v»p^{3/4}3/4n^{3/4}u (00)

ô Ng¹Av c f¹x^ap{ uctn¹tc0 Ok Pcf|uk v³dqt/
pqm¹en r gfk¹ xgrg u|go dgp hqi r¹wpm jgn{gv0 hgp/
u²i g gn u|^{3/4} r¹g¹wp{c c u|go²v²u Ài { n¹w|qw. o kp¹/
j c o²n{gp gri qpf qm¹|p²n0 U|go gkv eucm l» kf o w¹/
v³p p{kqwc nk kuo²v²u c n^{3/4}xgvng| n¹r¹gp p{kcvnq/
|qw< š¹ t¹n^{3/4}4n jqi { u|gtgpeu²o xcp¹ p^{3/4}mgn o gi/
kuo gtngfj gplk0

ô Gttg o gi kp¹v dgj wp{c c u|go²v0 C|v r¹vqn/
i cwco. jqi { o kv ku ngrngpg x^arcu|qpk c n¹gi {gu o gi/
u|»f¹v³utcA Mgm/g gi {^ancr¹p x^arcu|qpkA T^ap²|vgo
Pcf|uk r¹cu¹tc. fg g| ô Ài {n¹w|qw ô vgrlgup o c/
i^adco gt¹Av. ¶i {²p ku jcmi cwco²u x^atvco. jqi { c
hglg¹gn k Àt 3/4u|gu|gfk/g o ci^av Àcdd u|»tcA | u
eucm¹{cp p²o k kf o Àn³p o gi kp¹v n¹p{kqwc u|g/
o²v²u ¶i { u|»n<ô Gi {Àv¹hqi wpmwcl pk wi {gA

Mku² o gi rgr gwgp x^arcu|qnc0 <

ô Kgp. hgpu²i 0

G|gn c o gi dgu|²r²u dg ku hglg| f^{3/4}w0 Hgr¹m¹wpm
²u grn¹Àeu¹À wpm0

J c|chgr¹ xg|gv Àvqp Pcf|uk r¹cuc c l^{3/4}x hgrgw
xcn» ci i qfcm^apcm cfqw n¹hglg|²u0 O gi lgi {g|vg<
šG|v c| go dgtv kpn¹dd uclp^apk r¹g¹gvp0 | u g| cnet
cn¹t o^at j qm¹er. rcfk¹uj ku ngppk0 Okv x^atj cwpm
gi { kn{gp go dgtv n¹ô ô Ugo o kvô o qpf vco 0

Gddgp c o gi^ancr¹v³udcp Mgo^an c|qpdc¹ cr/
r¹qucp v²xfgv¹w0 G| c l¹mg¹o| o q|f¹w¹v¹pu^ai xq¹v
wi {cpku Xcj kf gffl¹ppgm gpp²m c t¹xcu|²u gt²n{gu
go dgtpgm c|^antec0 Mqtc h¹cvn¹i c »c u|qn¹w t^a
²u j cu|p^anc ukmttgr0

| fgurlc o²i c n¹uk¹À u|À¹gv²ug gn w jcnv o gi.
cp{lc r gfk¹/ p²j^ap{²x o À¹xc h¹cvn¹p n^{3/4}xgwg h¹t¹v c
u¹dc0 Xcj kf gffl¹kp r¹gi kf ugdd d^av{lc c o kp¹gp j^al/
len o gi ngpv šx^{3/4}3/4u u|wn^apō K0 Cdf wn J co kf u|^at/
p{ck crw p w hgn²u ¶i { i {gtogm¹tc »c o gi n¹gn/
ngw u|qmpk c u|¶¹p²u|ng²u0 šUgo o kv ugo gr¹twpk
ngxgugv o qpf cpl¹ô ô jqi { xcrcj qi { c| K¹v¹gp²tv
i {cp¹Av pg n¹mu¹Àpn# Xcj kf gffl¹kp »xcv¹qucdd²u t¹xc/
u|cdd xqn. o kp¹v¶| Cdf wnJ co kf gi {À¹w²xg0

O clf n¹pk hqi lwm o leuqf c gnu^apv gi {o^auj q|
o²n» hgi {xgtgmggn x¹kqw m¹fgrgo kpf wv o gi t^{3/4}
xkf gup Mgo^an²u Xcj kf gf fkp v»p^{3/4}n^{3/4}n^{3/4}x0

Xcj kf gf fkp qnqu²u txcu| go dgt xqn0 Mgo^an
g|v²rrgp c p²o gvtu^aik Àv crw kuo gtvg hgr0 Xc/
j kf gf fkp o^at c rgi gnu . c xqpcvq hqn(vxw dk cn/
o cuodd dgu²ni gv²ugk cmem^axcn xcmqo^auv vgw Mg/
o^akpcn0 C|v o qpf v. l»hqt o^ap pgo ku wf v. n¹xgn
²u o kn(gp vj gw²i gu go dgtgn dgu²r0 C|²tv d^apv
xgrg qn cp t^{3/4}kf gp c v^{3/4}ddkr cmvcdgrk À gn w0

C m¹pxqpcvq uqncp wc|vcn0 C n¹u²tg v pci {0
C v»p^{3/4}n^{3/4}v U|crkj K o gv wf xcto guvt. Nw¹uk U|w¹/
xk dgl u|qn^arwgx nco ct^au. Tgh¹m dgl o ci^apv/
n¹t²u u^ao qucp o^auqm n¹u²t²v m gr0 C xqpcvq uqncp
dgu²ngm c rgi w»ddk gugo²p{gnt n= m¹p^{3/4}ugp gi {/
^{3/4}pvv j gn(gu²uugn vci^amq| km c| ci i X0 O qj co gf
u|w^appcmc r^ar^axcn^{3/4}v²pvrgx²rk^an^auc0

ZX0 Dgpgf gm wi {cpku. c| gi {n¹tk Fgmc Ej kuc
d¹dqtqu. g| c| cu|n¹vwu crquqn c j^adqtA x²i g hgr²
uqtte hqtf wv c jcf xkugn hgrmj g| < jci {l^am x²i tg
cdde c hrgurgi gu x²tqp^vu0 ¶| { c v^{3/4}n^{3/4}m u|w^ap/
l^apcm ku ¶| j quu| À Appgr²n(gu²u go dgtk p u|¶k|g|
u|»n» r¹xgrg0 O kpv o qpf l^am c u|w^ap ucl^av o ci c
ô j ku ¶|»go dgt ô hqi cm c|v c x^arcu|v0 C v^{3/4}n^{3/4}m
uclv» ku u|»u|gtkpv n^{3/4}3/4ng0 C u|w^apk r¹x²rdgp gi {gv
ngp h^a|ku ukpeu0 C u|w^apk d²ng^ai { vgrl gup c|qpqu
c r^ar^a2xcn0 C u|w^ap n¹kgp vk j qi { c|qppcn r¹v/
u|k c hgi {xgtv j c c r^arc k cnek» o^au qtu^ai qndcp
ku ukngtgn l^at0 G| gugvdgp ngu| c| gm 0 cnk c|qppcn
gpi gf gm gungf pk hqi c| go dgtk u²i²u r¹gm kuo gtgv
j ¶k» u|cx^apcn0 Eucm o gpp²n gn dd j q| | qp gtgf o²p{v
c r^arc k d²ngn^{3/4}xgv²u0

Xcj kf gf fkp²u n¹u²tg v Dgtrkpdgp c u^ao wntc
^avcn¹kqw r qo r^au J qvgn Cf n¹pdcp u^an¹wcm o gi 0
kppgp o gpvgm nk c h j cf ku^an¹utc. cj qn Mgo^an J kp/
fgpdwi cn²u Xkro qu eu^au^atten ku vci^amq|qw0 M¹/
u dd O Àpej gpdgp ku l^atcn0 Mgo^an o quv o^at c rgi/
dgpu dd xku|qp{dc ngt Àv c v»p^{3/4}n^{3/4}uugn c|^avj k

fci j c v c v c p x² r g o² p { m \tilde{A} n³ / p d u² i . c o g n { d n n² u d d c
n² v l² t h k g m g p u² i g u n g f² u g l c n e f v . o² i p g o d q p v c n q /
| q w n i 0 C v t » p³ / 4³ / n³ / 4 i { n³ / 4 n g G p x g t v . v g j^a v v g t o² /
u l g v g u u l³ / x g w² i g u v n² v q w c | g m g p l² n k v² d q t p q n d c p 0
M g o^a n p g o u q n² t c g | v o q p f j c w c P c f | u k p c n <

ô G | g n c l² t h k x c n g i { \tilde{A} w u q m o k p f g p v r g j g v
o c l f e u l p^a r p l 0 0 H g n² x g . j q i { c | g o d g t h g r p { k l c
u l g o g k² u c o g m g w n l^a r k u c p v² o q i c v c o c l f v 0 0

C p² o g v h j c f k u l^a n² u q p o g i k p f w v c o w p n e .
G n u l³ / 4 N w f g p f q t h x g l² t n e t k h p³ / 4 n j³ / 4 h q t f w n c n 0
M g o^a n ô o c i c o q p f l c g n ô n² t f² u v k p v² | g w j q l |^a .
o k w n e l f q p n² r r g p c j c f l e² r l c c p c i { v x c u l k q h g p /
| \tilde{A} p c m <

ô O g n { k m x q p c r e m g h q i m n² u^a v t g o² r k G z e g m g p /
e l² f c r g i n g f x g l d d g u g d g p A

N w f g p f q t h g | v h g n g <

ô C | q h g p | \tilde{A} v o k p f k i c u l^a o w p n t c r g i h q p v q /
u c d d j c f^a u l c k r q p v q m g m g p k p f \tilde{A} w n 0 C v² / d d k v o c l f
c | g u g o² p { g m f³ / p k m g n 0 0

M g o^a n w f q o^a u w n x g w g c n k² t x^a r u l v² u c v² /
d q t p q m j g n { g w o q u v o c i^a j q l J k p f g p d w i j q l h q t f w n 0

G u g . c n² / 4³ / 4 u x c e u q t c w^a p n g t \tilde{A} v g t t g c o g i /
d g u l² r² u t g u q t 0

ô O c t u c m \tilde{A} t . $\frac{3}{p}$ / $\frac{3}{n}$ p g m u l^a p f² n w n d c p^a m p c i {
q h g p | \tilde{A} c k p f \tilde{A} v² u c 0 F g \tilde{A} i { n² v u l k m p g o p c i { q p d \tilde{A} /
p c m d g p p p g 0 X q r p c u l \tilde{A} g u . p g m g o ô g i { g f \tilde{A} n p g m g o .
o g i o q p f c p k < o k n { g p e² n v u t c v² i k c k u k n g t v ô t g /
o² r p g m c | q h g p | \tilde{A} x c n g i² t p k A

C j c v c m c u v g t o g v $\frac{3}{4}$ g i r q t q u l j c f x g l² t g t t g
c o g m g w \tilde{A} m^a m² c u l v c m² j q l r² r g w² u \tilde{A} i { u l^a » n v o² n² l .
r u u \tilde{A} j c p i l^a p <

ô G z e g m g p e k² f u l k x c t v x c i { e k i c t g w^a v r c t c p /
e u q n A

G | g n n k x g w g i { e k i c t g w^a v² u^a v p { \tilde{A} v q w c M g /
o^a k p c n 0 G | x q n v c | g i² u l x^a r u l 0 0

O q u v X c j k f g f k p . c v t » p t³ / n³ / 4 u n g t \tilde{A} v u q t t c .
v n² p v² / d d g v w f o g i 0

C p² o g v e u² u l^a t x k u l c c f v c c u l^a m² d c p c v² / 4³ / 4 n
v t » p³ / 4³ / n³ / 4 u n² v q i c v² u² v 0

Vqm^a eecn dgu² ni gwgn⁰ Pcf|uk rcuc n³/₄ xgv¹/
v²gw p² o gv¹ Xcj kf gfflp ul cxck[<]

ô V³/₄ nqtul^a i dcp^a ncr¹ dcp o^a un² r i qpfqn/
nqfpcm c p² o gv ul³/₄ xgu² it n o l²pv c j kxcv¹ n³/₄ n⁰
Qtul^a i qo cv c o l²plqddcp p³/₄ xgnx eucr^a uqm gi {tg
gt ugddgp u¹ v^a m cp² m¹ n jqi { gi {gv²gp ngjgv u²/
i ¹ p m ku xqpc gl gngv gr^a t¹ cpk⁰ J c gl ¹ i { o gi { vq/
x^a dd. V³/₄ nqtul^a i ³/₄ ul gqo rkn⁰ Hgn² i gf gffki k ul c/
xckd[>] n dk qp { qu^a i i cn nkxgj gvgo . jqi { c ul^a o w¹ntc
x² i | gv¹ eucr^a uqnev o gi ul^a p² n¹ q¹ pcm cncf^a n¹ q¹ pk⁰
Ngppg n¹ i { gu p¹nggo Hgn² i gf gddgp c vgn¹ l²pv²gdgp
o gi p { wi v¹ w¹ dk v¹ q¹ v¹ n¹ q¹ v¹ c¹ p¹ k^a

Gttg c eu^a ul^a t hnggo gm¹gf gw² u ô gr² i i² ngf/
xgv²gp¹ n¹ ô ¹ i { ul¹ » n¹ <

ô Pnggo Ai { v¹ul km Hgu² i . jqi { c | p n³/₄ /
p { gl g² dgp xcp¹cm gi { g¹gm cnkm n² v¹ n¹ v² u dk cr/
o cv¹ p¹ u¹ i qv j l²pv² p¹ m p¹ dg⁰ i p xku qp¹ v dk v¹ q¹ v¹ c/
v¹ o . jqi { o l²fp tgo² p { ¹ p m o gi xcp . jqi { ul gtgp/
eu² u dgh¹ gl² u¹ j gl l¹ w¹ w¹ p¹ n⁰ C | v j ku go . Hgu² i gf p¹ m
gl gr² i o

C v¹ » p³/₄ n³/₄ u jgn¹ gun n¹ i l²pv¹ w¹ i { c¹ p¹ cm¹ q¹ t
c | qp¹ dcp gi { n² | o q¹ f w¹ w¹ cn lgr¹ v¹ . jqi { ci i q¹ f¹ cn/
o ck¹ p¹ p¹ gm¹ gm² t¹ g ugo qu¹ n¹ v¹ cm¹ r¹ o

ô hgn² i g c p² o gv eu^a ul^a t ô hqn¹ v¹lc Mgo^a n
gr¹ dgu² r² u² v¹ ô gttg dgh¹ gl² v¹ c r¹ v¹ i c¹ v¹ u² v² u c | cl¹ w¹ /
j q | o gp¹ Xcj kf gfflp² u Pcf|uk rcuc nkn¹ t² v² n⁰ C
nk¹ t¹ cv^a n c eu^a ul^a t¹ pcm d¹ r¹ c ngn¹ gw xqpc v¹ cv¹ pk⁰
Okw^a p² t¹ gl v¹ go . jqi { pgo v¹ ul gv¹ go c | v¹ cm¹ q¹ » /
pcm nk¹ u² lqdd¹ t¹ c^a m¹ co c | cl¹ w¹ » r¹ o C eu^a ul^a t ng/
| gh¹ q¹ qw c v¹ » p³/₄ n³/₄ ugn² u Pcf|uk rcu^a xcr¹ o Gpi go .
cnk nk¹ u² v^a xqn^a m¹ co . o gi p² | gw gi { o^a uq¹ f r¹ g¹ t¹ ki
² u c | v¹ p hqn¹ v¹lc ¹ v¹ o

ô Pnggo pgo p { ¹ v¹ q¹ w n¹ gl gv² u gddgp ki c | c
xqn⁰ J qi { ku v² v¹ n¹ j gv hgn¹ t¹ » n¹ . jqi { gr² dg o gplgp
gi { v¹ d¹ q¹ p¹ q¹ n¹ pcm cnk² r¹ r¹ gp eucm jqi { c n¹ t¹ t¹ g¹ y¹ gl
v¹ cv¹ | kn⁰ Vgto² ul gv¹ gup c v¹ d¹ q¹ p¹ q¹ n¹ pcm ngn¹ gw xqpc
qf cl¹ t¹ cf¹ pk c eu^a ul^a tk ¹ f x³/₄ r² u² t¹ go Dgxc¹ m¹ q¹ o < x² v¹ v¹
v¹ go c | gv¹ n¹ gw gm¹ p⁰ Pgo w¹ f¹ q¹ o . jqi { o k v¹/₄ v² p¹ v¹
xgng¹ o < xcn¹ j qi { cp d² p^a pcm² t¹ gl v¹ go o ci co cv . o l² p /

f gp o q| f w r v t c n r r v g r p p p g m < i q p f q r v c k o v x q n l a t /
v n 0

ô C e u a u l a t o k p f 3/4 u l g g i { / n r v n r 2 u v v g j g v g w
o g i e u c n 0 G m m t j k v g r p o g i h q t f w n v 2 u h g r o l 3/4 0
š D q e u a u q p o g i ô q i { u l » n v ô š p g o p { Æ l v q w c o n g /
| g v r p p g n 0 0

G l x q n v o k p f g p 00

X c j k f g f l k p v c t e x c u l . u l » h w n e t p e i { w t e v ô
À i { n v u l k m ô o g i p { g t v g c h e v c n v d q t p q n 0 O g t v M g /
o a n v t 3/4 k f g u g p n k p g x g l v m c v » p 3/4 3/4 n 3/4 u g i { k m
u l a t p { u g i 2 f 2 x 2 0 © i { g u g p d a p v M g o a n c v » p 3/4 3/4 n 3/4 u /
u g n < l » n n k j c u l p a n c c l g n p { 3/4 u d g q u l v u 0 G t t g o a t
p g o u l a o q i q w G p x g t 0 C l v j k w g < c v » p 3/4 3/4 n 3/4 u 2 u c l
3/4 p 2 t l g v u M g o a n u g j q i { u g o h j i p c m 3/4 u l g l f t p k g i { /
o a u u c n 00

M g o a n M q p u e p v k p a r q n { d e x e n j c l e v 2 t 2 u g w p
p g o u q n t c d g v i n g w < x g u g d e l v a n c r q i q w e m o g i
l f l f c m c u q t x q u k x k u i a n v q m u q t a p 0 M g o a n g l 2 t v
D 2 e u d g w c l q w m a t c 2 u q i { g i { g n t g v x q m e t c f v
c u l v o d w k r q r k n i v r 0

ZXOC x k f i j a d q t Æ d g h g l g l f k n 0

C v 3/4 3/4 m d k t q f e m o Æ l u l w n a p l c . X c j k f g f l k p . r a t
j » p e r o Æ k c g h q i n e r l c c v » p v 0 C X I O O q j c o g f
p g x g v x a n u l v l e 0 C l c i i n q t a d e p g n j c n v X 0 O q j c o g f
u l w n a p v g o g v 2 u k u l g t v e t v u q p 2 u c l c l v n 3/4 k g v n g i
o g i v e t v q w v » p d g k m e v u k Æ p p g r u 2 i g p . o g n { g v c V q r /
M e r w d e p . c t 2 i k u l g t a l d e p v e t v q w e m o g i . q w a m o a t
X I O O q j c o g f o g n g w c D 2 e u d n p 2 j a p { p e r t c j c l c /
v 2 t v O w u l v e h c M g o a n r e u c . v d q t p q m l f p { g u . t g p f /
l g n g u . x 3/4 3/4 / c t e p { f q u l g u i g p g t a n k u k f q u l t w j a d e p 0

C p c i { a n o n 3/4 g n g i c o g i x e n » u w i u h g r 0

C l Æ l u l w n a p o k p f l a t v v » p t e f r v g g n g l 2 p o g i /
o w e w c k i c l k c t e a v 0 P g o v k n q n c x g v g o 2 p { 2 v 2 u t q /

nqpu| gpxgk0 Gpxgtv gn ul 3/4 ku gm q| f¹qwc nri gp/
 f^au šxlegi gpgtcrku| ko wu| kō vku| u²i²d n *c p²xrgi gu
 h i gpgtcrku| ko wu|. t²i k ul qn¹uc ul gtlpv. o ci c c ul w¹/
 v¹p xqn#0 C| Ā ul w¹p o ci c xgw^av c jcfugtgi
 h³4³4k xgl²p{rgv0 Eucm gl w¹p gt u¹lgwg o gi Vc/
 rccv pci {xgl²t ô n¹4 dgp rgw U| ckl J crko. c|
 gi {krvqo k jgtegi w¹fc ô n¹to^ap{^av jkxcvri¹dcp0
 Gpxgtv c| gugo²p{gm rgu¹vq¹m d^at vknqpk w¹vc
 n¹ugt u²i²0 | tgl¹v¹ jgn| g²v¹pgm dk| qp{vrcp¹i^av. ô
 jku| v²p{r¹gi. pgo uq¹tc pgo gi { ogt²p{rgv n¹l²trgv
 lgn¹k o clf c| gi {n¹tk p²r¹ngf xgpe p²ru| gt v¹pu²i²v
 Co gttg x^atqu| gtv kuo gtv. x³4³4u cwqo qdklc²u c|
 c| v p{qo qp n¹4xv. n¹| ki t^ap^avu. t¹gxq¹gtgu o cteqpc
 u^atp{ugi²f gmgn o gi tcn¹w švkn¹tk cw¹ō h¹rv pln
 gm¹qo qtqf pcm c v¹4³4m cteqn0 O kpf gpn¹gm xcp o^at
 j cn¹wlc c ul gtgpeu²v¹ptg h¹tf w¹vj^a dqt Ā dcp0

3; 3: n¹4 gr²p xci {wpn0

Gmqt v¹4²pv. jqi { Mgo^an rci^apcm c| v u¹ti³4
 p{³4²m D²eudg dct^ack< u¹ti ugp v²tlgp xku| c Ātc
 M¹pu¹vp¹a rqn{dc0 Pci { fqi qm xcp¹cm h¹nc¹co cv
 dcp0

Mgo^an ô d^at^a m¹pf» xgugtj co qm²u dtqpej k/
 vku| gu n¹| cmi {³4³4²mô c| qppcnj c| cw¹| qw0

L>cnct>lc. K| gv rcuc. c| w¹xctk o ctucm hq/
 icfvc²u v¹l²n¹| v¹vc c jgn| g¹t r0 Mgo^an c| qppcn
 o ci^apn¹kj cmi cv¹uv n¹tv c ul w¹p¹w¹r0 XI0 O qj co gf
 h¹icf lc0 M¹fxgu j q| |^a. eki ctgw¹xcn n¹p^arlc0 Mgo^an
 c| gm¹ dg^an¹w eugpf gv ettc jcu| p^arlc h¹gn jqi {
 o gi n¹tfk dgu|²ij gv¹g ul k¹v²p0

ô Hgn²i gu Wtco. d^av¹tn¹qf j cv²m o kpf gpv gn/
 o qpf cpk Āi { . cj qi { nri ul gt²p{gdd x²rgo²p{go ul g/
 tl¹p^am¹pcmc fqi qnA

ô Vgto²ul gv¹gugp. rcuc0 G| vgr^atqo 3/4pv r0

Mgo^an o ci {ct^a| cvdc n¹l f0 V³4¹ddgm n¹4³4w gl v
 o qpf lc< o kpf gpgn¹gn w ucl^av jcfugtgi²dgp n¹gm dk|
 v¹upcm r¹ppk c| qtu|^ai pcn0 Pgxg//g nk v c u| w¹p^a
 xg|²tnctkh p³4m¹00

C ul w¹p^a n¹gi wp|lc c ul go²0 Pgo l> lgn0 J cln¹w.
 j qu| Āc¹rlc o q| f w¹v¹cp0

X²i tg o gi ul »rn<

ô O clf o gi i qpf qrlwmc f qni qv0

Mgo^a ngm³u|³p² u³ xq| kn0

C u| w³p jcdq| km o²i o kpf ki pgo o gt p{kr
vcp hgn² rpk c nqo k² 2u c| Gpxgt/VcmcvF| ugo cn
gi {Ăwgu gmgp0 J c p{fncp u| go dgi gn|g| ngf km xgnĂm
2u o²i ku m ngtgmgf p²pgm hgnĂn c| wcmqf» o ci c
ku o gi dwnj cvp²n0 C nqo k²xgn o²i c u| w³ppcm
ugo l» v²l²rp0 C| jqi { Gpxgt o^at pgo xleg/i gpg/
t^arku| ko wu|. pgo u|^ao f0 Ngi lqdd dct^alc c o kpu|/
vgtgp³m< o ci c ku o²i cm³x j cf Ăi { o kpu| vgt0

O kv vgi gv Mgo^a n²u XIO O qj co gf A F co cf Hgtkf
Dwucv ruc. c u| w³p u>i qtc²u dct^alc. c| ³4gi
Cpi r²dcp hgp w. | ugp²rku u| cmppgo dgt. o quv o^at
ši tgcv/qf/o cpō/t²i j g| n³4 gn ô o kpf lqddcp gn v²t/
dgp r²r0 XIO O qj co gf xgrg vcp^aeunq|| c o gi c vggp/
f ngr0 Hgtkf Dwucv c d²ngkf m gi {nqt k rqrkkmuc
j cvm cu go dgt< rcm³lc xgtugp{g| c u| w³p²xcr0
šHgp²i ô c e³p g0 Hgru²i g. j cvcpqp vĂk f^ao c. qnqu.
xk²i kuo gt cuu| qp{. c| wcmqf» p x²tg0 C dk cm cu
eu^au^atk xceu^anap f n gn c| Gpxgt²u c Mgo^a n
rtqdr²o c ku0

Dwucv²u XIO O qj co gf o gi^a mcr qf pcm j qi {
o quv o²i ugo o kv ugo nji gv vggp0 M²t xqrpc c rku|/
vqn{vkf gn wgnĂsp0

Mgo^a n² v³dqtpqm c| qpdcv vĂtgm gvmp0 Kio²v
cwf kpep^av n²t0 C u| w³p o gi kpv hqi cf lc0 Mgo^a n
o quv o^at j gxgu< c| v o qpf lc. c| wqn» kf ngv²rĂm
ô²u gddgp ki c| c ku xcp0 C htqvt»n gi {tg x²u| gugdd
j fgm l³ppgn0 Uqm j gn{gp nji gvvgp o^at vtcpk c
xqpcrcn²0 C u| w³p c| qpdcv j kf gi²u nko²t0

Mgo^a n²t| k j qi { c u| w³p o^at j cv^atq| qw²u
j k²dc o kpf gp o gi i { |²txgr²u0 G| c j kvrgp hgrku/
o gt²u c eu^au^atk f qni q| »u| qd^adcp. kf gi guu² vgu| k0
Gt²n² gugdd j cpi dc ngl f0 C u| w³p. ô u| qn²u^a »n gn
v²t nji. ô n³4 dgx^ai0 Gi { fctcdki o kpf ngvgp gi {/
u| gttg dgu|²rgn0 X²i tg XIO O qj co gf j cpi qucp.
o gi p{qo xc c u| »v. f³i { u| »n<

ô Vkrvcv²u Gpxgt rcu^am gzegngpek^a kmcn
o kpf c/v o gi dgu|²ngo. co kv vggp u|Ăm²i gupgm r²/
vqn0

Mgo^a n^v xq| kn0 Gddgp c r knrpevdcp pgo vj gv
gi {gdgv0

C ul wn^a p² t| k j qi { xcrco k² ng grⁱ v² vgnn vct/
vq| km j c gl v c pci { vj gw² i go dgtv pgo cnetlc
x² i n^r grxgu| vgl0 M² v j² ki ..r kj gpv² k0. c| v^a p Àtc
cwf kpe^k tc tgp^f grk0 Vwf qo^a u^a tc cflc. j qi { c| gi { km
nkugdd. ul [¶] kck j cf ugtgi cr ctcpeupqm^a x^a p² xgl v² nk0
C hgm dd rctcpeupqm^a i qv c| qpdep o^a u n^r lc U| k
t^a kdep0

C ul wn^a pk gn ul qd^a dcp qw^a n^r pcm Gpxgt. K| gv
Pcf| uk² u c v² ddk r cu^a n0 Gpxgt o quqⁿ qi xc hqi cf/
lc c ul wn^a p^w n nkl³ x crⁱ tgp^f gnl² v. Mgo^a n0 Mgo^a n
ul qtqucp Gpxgt gr² r² u [¶] { ul » n o² i o k^p ki h³ /
lgddxcn^l j q|² u^v dqt^p qm^a tu^a j q| <

ô Dt^a x». ngf xgugo # G| v l» n o gi euk^a ncf #
Qn{ cp ugtgi gv cfcw^a n p² ngo. co gn{ l» hqto^a p o^a t
eucm p² xngi r² vgl kn0 L» n wf qf. j qi { g| gn pkpeu o kv
ng| f gpk² u ugo o kv ugo r² j gv n² x² ud² ul gtgl pk o k^p v
fleu u² i g0U² r nku dquu| À^a n^a n^a # I tcw^a n^a #

J qi { Gpxgt o kv x^a ncu| qrv. ô gi {^a n^r dcp.
j qi { g| c lgrpgv c eu^a ul^a tk gn vgtgo dgp. j qi { cp
hqⁿ v r². ô c| v o^a u q^r cit» n pgo w^f lwm o gi xk^a i [¶]
vcp0 Eucm Mgo^a n ucl^a v w^f » u[¶] uc o ctef v hppp gtt n
c| wqn» lgrpgvt r0

Ogtv g| xqrv Gpxgt² u Mgo^a n wqn» ul go² n{ gv
v^r m^q |^a uc00

C| ³ / u| gqo n^a u 3; 3: ul² p k^p f wv o gi 0 ~ tk^a uk
xk^a i tgpⁱ gv tqdcllen tgeugi² uugn ul^a i w^f qw0 U| k^p v
p^r qmcrw M^q pucp^v p^a r qn{ ki h^w qwc ekm^q p0

C dcl Dwi^a tk^a dcp ng| f f³ / u0 C dqri^a t ³ / u| g/
qo n^a u v⁴ v² p² gv n³ / kuo gtv= v⁴ / m xqpcv^q |^a udep
c| qpdep o gi n^r gm go n[¶] / gpk j qi { c v⁴ / n³ / m² u dqri^a /
tqm gi { Àwo n³ / f² ug o^a t ng| f gw n hqi xc ugo p{ w
i qf qw v² to² u| gv² u c^r r qn^q p 3; 34/ dgp o² i gi { o^a u
gm² p j cteqn c n² v ul qo ul² f. 3; 37/ dgp xku| qpy o^a t
ul ³ / x² gv² i gugm² r² v² g/ j crⁱ rtc# M^À / p³ / d³ / v² t² / v^a /
xqn² tv hqⁿ v c n² v qtu^a i n³ / v c| » x^c ku c f k^r m^q o^a /
elck j cte0 Gu| cm^f qdtw^f | uc. Fgf² ci ceu. c O cte^k /

xqpcn ô crki r^at x^ato gi {p{k vgtĂrgv ô o²i ku crki
x^at^vm o kpf ngwgp. j qi { x²i g rgi {gp c j^adqtĂpcn0
O clf c| v³p xgu| gngf j gvgm²u qu| vq| nqf j cvpcn0

Dwi^atk grⁱgfvggp xqrv c| gi²u| o qucvpk j^a/
dqtĂu dgxcvnu|^auucr0 C v³dqtpqm jctci wf^vcm
j qi { c p²o gv u| 3/4kgv²i gugm pgo u|^aml^am rg c| 3/4u|/
u| gu 2tv o wp³ek^v 2u šgo dgtcp{ci qv0 P go xqrv
grⁱ p{gtucp{ci. pgo xqrv grⁱ o wp³ek^v0 O kpf gp gr/
hqi {qw c j quu| Ă j^adqtĂ crw0 Eucm c p²o gv hAm
n³4rgu²i wf^auc o ctf vo gi 0

3;3: lĂpkw 38/^ap c dqri^at Tcf qu| rexqhh/nqt/
o^ap{ rgo qpfqw0 Cpvcv^vdct^av o koku| vgtgm x^anqv/
v³m hgn< O crkqhh c| Ă o koku| vgtgp³4m p{Ăncp p²/
o gvgngpgu xqn0 C dqri^atqm jctci lc c v³4³4³4m gngp
ku hqtf wn0 Gppgm c jctci pcm gi {km h qnc xqrv. j qi {
c| gp^xgk uclv pgo t²i. grⁱi² kf u| gt vgpĂn p{Ăncp
2u 2rgugp v³o cfvc c u| 3/4kgv²i gu Dwi^atk^av< o k²tv
pgo cflc xku| c c xqrv v³4³4m vgtĂrgvngv. c Octlec
2uc Utwo cr qo r^au x³4i {gkA

U gr vgo dgt 37/²p v³4vg^av Htcej gv f0Gur²tc{
Dcm³p/j cfugtgi g c dqri^at x²f gm k xqpcrv0 C dqri/
i^at e^at. Hgtf k^apf 2u c jcteku Grgq>tc e^atp² o²i
c Xk^oqu eu^au^at>n f³u| pgm ner qw nku rct^af²u^ai {Ă
nev ku hgrj Ă cwc c U >hc n³4Ărk j gi {gmtg0 C| qdcp
o kpf gp j^kdc0 C htqv^vw³4²u v^kgpgi { nkqo²vgt u|²/
ngu0 C| cpvcv^eucr cvqm o^at g| gp ngtgu| vĂn ku n³p{gr/
o gugp dgu²v³ij cwc xqpc c n³4r qpk j cwm cm u| 3/
x²dg0 Fg c p{3³u gi {tg v³i wn0 V³ per o Ărc o^at
jcto kpe³4 nkqo²vgt u|²ngu ner w^amv v³txc c| cp/
v³pj cfugtgi gn w0 C dqri^at^aveur qtqv³u hglxgu|/
vgw. gngp^an³up²mĂrk xku| cxqpw³u^a hclwn0 C t²/
i gp c ngxgi dgp n>i > nev u| v>hc dgn³4u| 3/4v³4w0 Dwi/
i^atk²u tclwm ngtgu| vĂn c n³4r qpk j cwm cm uqtuc
dgvnlgugf gw0

00 O^auqf pcrte o gi l³4vgm Mqpuvcv^ka^rqn{dc c
uĂti 3/p{3/4m c o^auqf km htqv³4u| ggo n³ut>n ku0 Cngpd{
cpi qn v³dqtpqm jcfugtgi g 3/4u| gtqrrcpvqc c u| k/
tk/r crgu| vkck o ctf²m v³4³4m jcfgt ngv0 Gffki ku
p²i {u^a| p{qrexcp nkqo²vgtg xqncm o^at dgpv v³/
t³4m vgtĂrgv0 Nko^ap xqp Ucpfgtu octucm c o qu/

vcpk v̄4³/4n̄p² o gv h rctcpeupqm i² r r w n̄ xcn ugo
wfvc xqpc ucl^a v go dgtgkv o gi^a n̄ cpk c | gu gxgu gw
hw^a udcp0 M̄ wu^a | ³/4xgpg | gt cpi qn² u uqm v̄ | g | gtp { k
dgv wk̄ ugi² feucr cv. Aqppcp hgnv p cted nkunk^a /
n { qm ugn̄ gm v̄4 | ugkugi ¶ gwgm

Ncy tcepeg g | tgf gu. Hglu^a n c n̄ u ddk kcm wten/
n̄ f »² u Klp U | cwf o gmn̄ k nk^a n̄ o^a t t² i gp u | w² m
vkqn̄ cvqu j^a n̄ lw̄ n̄ 0 Nko cppcm j wu | qpj cvg | gt i { c/
m̄ i quc. g | gtn̄ wu^a | n̄ xcuc² u o kpf³ / u | g n̄ wu^a | ³/4xgp
ci { Ā c xqn̄ 0

C r cngu | vk̄ ck htqp^a v̄4² u o^a t pgo ku xqiv eucv0
C v̄4³/4n̄4m² u p² o gvgm c | gi² u | j cf kcp { ci qv j^a vc/
j ci { xc. o gpgm̄ n̄ gn̄ 0 Nko^a p v̄ xk̄ cv̄ ki rgo qpf qw
c rctcpeupqm^a i t » n̄ 0 Xk̄ n̄ qu eu^a u^a t xkuu | cu^a i ³/4 p { /
| ³/4v̄ < šo ctef lqp̄ 0 š Rctcpeū 0 Nko^a p gttg o ctef v̄ 0
K̄ | gp gn̄ | o² p { gm w^a p n̄ g t̄ n̄ v̄ uqt c | gi { tg gt u³ /
r cngu | vk̄ ck cpi qn̄ ugtgi x² i u i { | gm² tg0

Wi { n̄ wu | qw. o k̄ vj c Cpi nk̄ eucm o quv n̄ | f gp²
o gi u | qnpk c j^a dqt̄ v̄ < o k̄ f lqddcp dgr̄ | ³/4w̄ 0 C ugtg/
i gm gt vctv̄ n̄ ck h̄ n̄ { v̄ p̄ qucp Ā² u Ā j cl » tcn̄ /
o^a pp { cn p³ / k̄ gn̄ f v̄ gn̄ 0 C tqpi { qn̄ lc dwn̄ n̄ v̄ v̄4³/4m̄ n̄ /
v̄ p^a m r gf ki gi { tg lqddcp² j g | v̄ gm² u o wp̄ | k̄ lw̄ m ugo
xqn̄ 0 Nko^a p. c n̄ w² i dggugw j c | chk fg qdlgm̄ ¶ x̄ v̄4/
v̄ p² u | . o ci c ¶ | c g | gn̄ v̄ 0

C jcto cf km J k̄ d / j ¶ v c j cf xgl gv u² i i qpf qucp
gn̄ kn̄ n̄ c c p² r gn̄ w̄ 0 Qtqu | qtu^a i Dtgu | v Nk̄ qxu | m
w^a p nk^a m c uqt d » n̄ 0 O quv Euleugt̄ k̄ m̄ n̄ i { k p² r dk̄ v̄ qu
h̄ p { gi gv lgi { |² n̄ gv m̄ n̄ f ³/4v̄ c o gi i { gpi n̄ v̄ V³ / 4³ / 4n̄
qtu^a i pcm̄ Qtqu | qtu^a i c dtgu | v̄ k̄ qxu | nk̄ d² n̄ v̄ ugo /
o lupgm̄ v̄ n̄ k̄ p̄ k̄ o gtv c v̄4³/4n̄4m̄ cu wqn̄ » j » pcr qm
» v̄ c o^a uv ugo v̄ gu | pgm o k̄ v̄ o gi u² tv̄ km c | c n̄ ¶ | v̄ d² /
n̄ v̄ 0 | u v̄ p { n̄ i < o k̄ n̄ w̄ kf^a v̄ o k̄ pf gp tgeugi / tq̄ qi .
ô qf cm̄ n̄ p̄ Dcn̄ w̄ dcp² u c n̄ i p { g | x^a tqun̄ lc. c rg/
tk̄ t̄ k̄ n̄ c u | cn̄ f v̄ p² o gv n̄ v̄ qpcu^a i v | k nk̄ c r^a n̄ c /
wf xctq̄ n̄ c c p² o gv |^a u | n̄ v̄² u rt » d^a n̄ c o gi u^a m̄ pk̄
c rgt » n̄ gw x^a tqun̄ v̄ 0 W^a p̄ m̄ c v̄4³/4m̄ n̄ v̄ qpcu^a i
l̄ p̄ . n̄ k̄ x̄ ḡ tk̄ c šu | ³/4gv̄ u² i gugn̄ v̄ 0² u o ctef c | Ā
.. to² p { qtu^a i dcp. M̄ cwn̄ | wudcp. I ggti k̄ dcp. Ek̄ /
n̄ eu | k̄ dcp0 C | ³/4o² p { v̄ g t̄ n̄ v̄ gp ku o k̄ pf o guu | gdd
p { qo wpcm dg. c d² n̄ gn̄ i² u gn̄ p² tg ku. c v̄4³/4n̄4m̄² u

c p²o gv nēvq^an0 C| Àl Qtqu|qtu^ai. co gn{ Āppg/
r²n{gugp ngo qpf o kpf gp š²tf gm|l²t^al^at>n mĀj >/
f²v^aŭ^at>n²u jcfkn²t²v²ut nō x²itg o²i ku o gi wplc
o kpf g|v0 Vercv. c v³/₄³m pci {xg|²t Dgtrkpdg ukv
o quv0 K^v c|qppcn²tkpvng|²uv ngtgu c| qtqu| Āi {xk/
x xgn²u h v²l²v² v²tv. eucm pg v²o cflcpem Ātc c
o^at o gi j cnpemj kvqtqu| qmku#

C dqi^at²u r cngu| v²ck h²qpv²/au| gqo ū^au Vercv
²u Gpxgt nqto^ap{^av go dgthrgwk gt hgu| v²ugntg
uctnerlc0 C|v tgo²rk^m o quv ku euqf c n³/₄xgng|j g^vkm
dg c| wqnu> rgtedgp. o kpv cppen²gl²p. c Dcn/
n²i/j^adqtĀdep0 Fg pgo v²{ xcp0 Rrcgu| v²ck wi {cp
o²i o gu|g xcp. c dqi^at nēr wdcp^am> h²cp/
ek²m r g²ki pgo M²qpv²v²a²r qn|. jcpgo Dwf c/
rguv²u D²eu gngp. ²u|cnc hqtf wpcn0 G| h²pvq/
ucdd pgnkn0 C n³/₄r qpv²cm xg|²t²netc c|v j ku| k
j qi { rgi c²dd ku c U^axc/F wpc xqpcp^an o gi rgi gv
H²cepv f²Gur²tc{v^a n²i/cp²0 J²dc0 C j c²mqcp nk/
o gtĀv Dwi^atlc c²l²c c hgi {xgtu| Āpgv. o c²l² t³/₄
xk²f gn w²pc c d²n²v ku0 M²cr kw²ek>. hgi {xgt²v²gn
g|. pgo d²ng# C h²cepk h r²ctcpeupqm jcf ugtgi²/
xgn pci {qp jco ct c n³/₄r qpv²cm>n xku| chqi rēv Dgn/
i^af dcp^amqw²u qw xk²| km hq²tcf c²tt^a ngw. rnm/
euk²o^au o ci {ct vku| vgnngn c²km fgr w²ek>dc l³/₄v²gm
j q|^a0

M³/₄dgp c M²qpv²v²a²r qn| gngp xqpw> r cngu|
v²ck cpi qn jcf ugtgi ku dgxqpw^a Fco cu| m²u| dc0 C|/
v²p g²gukm Dgltw²u T²clcm ku0 C| cpi qn lgrgp²ugm u| g/
tkpv jgwxgp³/₄gl²gt v³/₄³m p²o gv²u qu| v^am²o ci {ct
nēvqpc. j^atqo u^a|³/₄xgp^ai {Ā gukm c ng| Āndg0 M³/₄
xgng| km C²gr r>> cpi qn vcp²qm²u r²xcu²i fĀd³/₄³/₄
c o^an{xc/ ²u ŭ^ati cu| v²p. euqf^au. ³/₄gi x^atqudc< c
x²p Ekcf g²nc c²rwk we^an²up x²i ki g| t²xgn^ancpcm n²v
q²fc²v uqth²rev c| go dgtgn0 H²j²tdw²pw| qu c²cd m/
xcu²i ô o quv o^at w²l^am n²km i { |pgm nk o gn²
ngm^ancpk ô n²i²tk c| cpi q²ncv0 Xg| gv lĀm H²ku|^an
go kt. nk²| k c x^ath²ntc c o g²nc²pci {ugt²kh |^au| n>/
l^av0 C| cpi q²qm o quq²(qi p²em²u j ci {l^an0 C p²o g/
v²m o quv o²i eucm gi { x²i u k²lgn²ek>v c²nc²pcm c
v³/₄³m²ngm n²af gpk< gi { p²o gv jcf qu| v²n{v. co gn{

c|qpdep vto²u|gvgupp nřu p²tng|kn0 Vgj^av c jcf/
 qu|v^an| Rqvd»n u^{ti} ugp xku|cjcl»|km²u h^{3/4}xqppk
 rgi cř dd Mqpuvcpk^arqn| x²fgr²tg0 Rgtu|g. p^gxgw²/
 igupp nku eucrcv gl0 Oquv o^at xk^ai qu. jqi { c Tq/
 o^apk^ad»n²u c| qru| hqpv»n *c| qru|qm ku c nk/
 ogt^{ti}u rgi u|²rřp xqncm+ F²n/U|gtdk^adcp Hcpejgv
 fGur²tc{ gr² xgvgw qu|v^am/o ci {ct²u p²ogv euc/
 rcvqm pgo wf^la m hgnct»|wv^{pk} c hcpk^anev0 C
 p²r f^{ti}g jcfxg|²tglm gmgp hqtfwn c| ci k^vvtqm u|v
 l^am c v^{ti}gv0 C| gmugtgfgw. lgn|excmmen o gi dqp
 vq. c|qphgn^{ti} h^{ti}tcfv²u j c|cx^ai {»f» ugtgi gmgⁿ ô
 Ai { rřu|qw cmqt ô pkpeu o kv ng|fgpk0 Gi { hrg/
 nu²i gv x^ancpk wf» h^{ti}tk²ngm euqf^anev vjgvgw
 xqpc0 C euqf^am c|qpdep o²i c| kf m o²j²dgp
 u|wpp{cfvⁿ⁰

(00) | u grkpfwn Ykuqjql. c| co gtnck gp^{3/4}m
 j^{3/4}. P²ogvtu|^ai. Cw|vkc. Oci {ctqtu|^ai²u V^{3/4}
 t^{3/4}qtu|^ai d²nřvnřt ngxgr(00)

V^{3/4}qtu|^ai o²i m^{ti}p ku rt»d^amq|kn0 Co gtnk^a/
 »n c|qpdep pgo uqnev x^atjcwem Vcrcv²n0 C {cp/
 nrgm o^at gn| rgi o gi ^{ti}gp²m jqi { c| ^{3/4}o²p{^{ti}
 f^{3/4}u²tv hrgn u qtu|^ai i cn²u nqto^app{cn pgo v^{ti}/
 i {cipcn0 Ycuj kpi vq o²i c|v ku o gi ^{ti}gpvg< Gpxgt
²u v^{ti}tuckgr²rřu²v²u nku|qi^anev^au v^{ti}pk^aplc#

C u|o kcek nqto^ap{|». Tej o k dgl. c|qpdep o²i/
 ku n^{3/4}xgvngv kpf^{ti}qw ^{ti}pcn0 C| cpi qmⁿjql rgi n^{3/4}g/
 rdd gu v^{3/4}m h jkxcvcpqm o gi { I tggpxkrg/jgl
 Cpi rkc cv²pk n^{3/4}xgv²jgl0 Oqpl^am o gi < V^{3/4}qtu|^ai
 o quvo^at řo kpf gp^atp^o d²nřv^{nc}t0

C Vcrcv^{nqto}^ap{ c|qpdep euqf^arcvunřr gp o²i
 o kpf ki c jgn²p xcp0 U|kpv Ai { ngm rxcnc^{tpk} ngv
 x²u xgnc pgo |gv^ut n0

C nqto^ap{r^atv x²i ^{ti}ku hqto^arku dk cmv^{cp}ř i k
 u|cxc|^au^{cn} o qpf^cdc rg c o kpk|vtgngv0 C| wcmqf»
 rgh^{ti}c^{dc} ²u c d^{ti}»^ai k gr^at^auki ô o gtv hrgn u²i tg
 xq^auwⁿjql nřu²i pgo hřt ô tk^gv cřw v^{ti}lc
 ngv0 Ugd²dgp o gi cřmwn c| Ai nqto^ap{< Cej o gf
 K|gv r^cuc. vku|vcu|go . p{wi qfv eucⁿf^crc. c nkrgt/
 o gv . |^{3/4}o^{3/4}m d²ngulgtgv v^{ti}dqtpci { . Mgo^an d^ca^{lc}

rgw c| Àl pci {xgl²t0 Xkuu| cngt. Ñv o kpkul vgtk ul²nř dg
 F| ucxf dgl. c j^adqt. Ì nk^{3/4}2 ugnqt rgnř⁴u| ^{3/4}p v r²p| /
 Ñi {o kpkul vgt²u gi {gvgo k vcp^at ku0 C| cpvcpv pgo
 xqrv jclrcpf» c j^adqt. Ì tv hrgn u rqrkkmwqmmen d²/
 nghgn² vrgnt n v²ti {crl0 C v^{3/4}3^{3/4}m c hqi u^ai wncp
 řx Vqy puj gpf cpi qn v²dqtpqmv nřtkm hgn jqi {
 o gplgp Oqftwul dc. Ecnj qtrg cpi qn cfo k^a rkuj q|
 c| c| qpperk hgi {xgtu. Ñpgvgv o gi nř⁴p0 O quv o^at
 U ħk. Vtk rku|. Mcwnř| wu. J gf| ucu|. O gl qr qv^o o kc.
 gl c| gi²u| j^atqo xkř^ai t²u| tg nksgtlf htqvi { t. Ì
 c| cpi qmř² u u| ^{3/4}kw²i gugkř² (0)

Ecnj qtrg cfo k^a rku xgl²tj cl»l^ap. c| šCi co go /
 pqpō hgf²ř gv²p ħ²v m cř^a c v^{3/4}3^{3/4}m o gi d ħ qwcm qm
 w dgt jcto kpecf kř^ap c| cpvcpv²u c| Q| o^ap Dktqfc/
 mqo hgi {xgtu. Ñpgv²0

C p²i {²xgu vci² flc h^{3/4}3^{3/4}wngi ^{3/4}f Ñvc h. Ñi i ^{3/4}p {0

C šj cf kvgpō o gi dwnq w< xgrg gi {Ñw c| qtu^ai
 ku0 Fg o kv v^{3/4} f^{3/4}w Gpxgt o quv o^au dcl^axcn o křk»
 v^{3/4}3^{3/4}mp {qo qt. Ì u^ai^a xcnA

F ř^{3/4}p ^{3/4}u| g gl c xkř^ai. gd. cnk d^aplc0 F ř^{3/4}p
^{3/4}u| g²u f ř^{3/4}p t^a o kpf gpnktg. cnk nř w²i dggukř0
 Mř w²i dggupk< gl nř^{3/4}pp { 0 Fg c j c|^av o²i ku o gi ngm
 o gpvgl0 C pgo /gv. c| ^{3/4}3^{3/4}m0 C| pgo r wul wrij cv gi {
 xgu| vgw j^adqt. Ì w²p0 Eucm hřtk ngm cnk c u| gtgp/
 eu² vrgp²i dgp xgl guug0

G| v c u| gtgr gv²t| k o quv O wul vhc Mgo^a3 o ci^a /
 j q| o²n»pcn0

ZXKOGpxgt j cř^aw0

Gpxgt rcuc. c dwnq w j cf kvgp. p²o gv tgr. Ñn /
 i²rgp grō gpgm. Ì0 C o^auqf km pci { gngph²n ku grv /
 plm vj^av xgrg Mgo^an²rgv²d n< Cdf wn J co kf cppcm
 kf gl²p U| cmplkřdg. Gpxgt c| qpdcv o quv uqmmen
 o guu| gddtg v²xq| kř0 Gn u| ^{3/4} Dgtrkřdg. qppcp O qu| m
 x^adc. x²i ÑDgn /f| ul^adc o gpgm. Ì0

Pgo wflwm u| gddgp xkuu| ccf pk Gpxgt vci kmw
 j cř^ař v. o kpv cj qi { O wul vhc Mgo^an gi {nřtk m. Ì /
 f v²tuc²u u| go²nř gu kuo gt ug< Guu| cf dgl. c pci {
 nrgkv^{3/4}2 pgv ħ» grō qpf lc0

Guu| cf ¶i { o qpf lc gnGpxgt j cññ v<

ô Gpxgt o kpf gp ²t|gri uu²i v n o gpvugp kp/
f wv gn Æl^atc c| ³uu|gqo ñu w²p ô c| gi {gvgp qt/
u^ai hgr². co gn{ c P {wi cv/Gwt>r c gmgpk j cteqv o ²i
pgo cfvc hgr0 3; 420 hgdw²t v| gpngwgf kn²p Mc/
tcej cp m²ñ²ñ² {k p²r dk vqu Æl^ap dglgvgpvgw o c/
i^av Oqu| nx^adcp. Ngpkp²r0 ~ . c uqtu kt>pk²lc# Gpxgt.
c| ³4o²p{o²u^atn>. Oqu| nx^adcp c| ³4o²p/ Mc/
tcej cp m²ñ²ñ² {o kpk| vgt xgpf²i u²i²dgp. ²vng| gw ²u
cnmf vj >per u^a o tc00

00 C jcfxgl²t Gpxgt ki gp t²u|ngvugp cxcwc
dg vgtxgldg c rqrkkmw Ngpkp0 Gn ngm hqi ncipk kpf k²v
o²i r g f ki gi { qn{cp jcfugtgi ugi ¶u²i²xgn co gn{ gv
Gpxgt o ci c vqdqtq|pc. c wtnqo^ap ²u chi^ap pqo^a//
fqm n²4 Ær0 3; 42 gngl²p. co knqt Qtqu|qtu^ai pcm o²i
r wulvc ñ²v²tv nmgw j cteqpk Ngpi {gn²tu^ai dcp.
Gpxgt r cu^ap n²ñ²ñ² dk qp{^atc ugpnk ugo cn²fv Oqu| m²
x^adcp. cnk kn{gp xcn²o gt jcfkvgtxgv pgo eucm rcr k/
tqp wfqw xqpc x^a|qpk jcpgo c eucv²tgp o gi
ku wfvc xqpc xcn>u|cpk0 Ngpkp c| qdcp pgo c| c|
go dgt xqmw cnk š hgu²i g c u|wn²pk x pgn²o gu/
o²kv o kpf gp vx^addk p²m²ñ² o ci^{a2}x^a vgu| k0 pgo d¶
|qw eddep. j qi { kpf k²v hqttefcm cu|cpk ngj gv0
gn wg o^au e²n rgdgi gw0 Dk vqu xqmw dgppg j qi { c
xcf j qtf^anev. co gn{gngv Gpxgt Vwtngul²v pd>n j q|pc.
kpf kc jcv²t^ap u²u|>tp^am c| cpi qm²n0 Fg gi { kn{gp
v²o cf^au o kpf gpgugt g ettc n²p{u|gt¶vgp² Cpi ñ²v
j qi { kpf kc jcfgtgl²v ³uu|gxqplc. j qi { x²f gng|j gu²m
c| Æl Dcdwt n²p gmgp# O leuqf c vj gto gpvu²v uv lg/
ngpvpgg gl u^ao^atc#

ñi { vgj^av c n²v go dgt n²4 ³4w .cnknpgm e²rlck cp{/
p{ktc gmgp²vugm xqncm eucmwi {cp ñ²v tgl³4w c u| ³4
xgu²i 0 Gpxgt rcuc Oqu| nx^ad>n Dcnwdc wc/
|qw ²u c| šGp{qo qw P²r gm Mqpi tguu| wu^apō j ktf gv
vg c Mrgv n²4 gri hgn| cdf wñ u^a v#

ô C xk²i v²4v pgrgo ñi x²tgugdd hqttefcm c
n²4 dgp ng| f f³4w gn c Mrgv wqn> o gu²lg. c| Gpxgt
j cññ t>nu| >n> ñi gpf c0

ô Dcnwdcp h²rkvgpn²pv vku| vgn²m Gpxgt0 C
Mqpi tguu| wu vci lck cnknpgm c| xqmw c hgrfcwm

j qi { c nqo o wplk o wuv nkj kfgu²m v²ftgij wmqwcm
 co knqt o gir knepqw^am c nerkc tqnqp^aw0 C nku Vc/
 |c/Rk o geugvdg Gpxgt c ul »ul²nt n rt²fkn^anc c
 r^apk n^ao k o wuv. c r^apwtnk o wuv. c gwt »rckcm= nktv
 v^au^av. Ai { j qi { c nqo o wplk^am cnknpgm Gpxgttg
 hgnAi { gpk^{3/4}m ngnw. o^at/o^at cw »n vctqwc m j qi { gl
 c ul^{3/4}gw²i gu c nqo o wplk^a nqpi tguu wuv ô n^ark
 l^awu/nqpi tguu/wu^a hji lc x^anq|vcpl0 Gpxgtpgm
 dwn^auc gm²tg ku. »tk^auk xqiv c vgnp²n^ag²u f|uk
 n^arxkugn k pgo Ngpkv. jcpgo v vgnp²gw²m ul gn
 ngo k xg²tAnpgn0 C dqngxkn^agm gw n gi {^anci^ap pgo
 xqncm grci cfvcw0 U v. gi { Tgl k p^agx hpcvknwu
 hcvrgo dgt t^aku n w. fg pgo vci^anc gr0 Gl gmw^ap
 t^ad^aq^av^am Gpxgtv. o gplgp Dqnj ct^adc²u o gi d^aq^av^am
 gi { dgppu^a n^a4w x^{3/4}4^{3/4}u j cfugtgi o gi ul gtxgl²u²xgr0
 | dgtgp tn^a4 dqngxkn^agm ul go g gn w. ^{3/4}u^{3/4} gup j w
 ul qpn^av v^{3/4}4^{3/4}m ku vgn gi {Aw. cnkm rcuucpn^apv i {An/
 ng|vm xgl²tAm n^a4². n^argw ô²rg²dgp gn ul^{3/4} ô
 Gpxgt c| Vw^apl^apcm u^ati c/j qo qnqu h^{3/4}f l²tg. c
 v^{3/4}4^{3/4}m^a uj c|^al^adc0

Co knqt Gpxgt rcuc. f|uk j ug. ctc{ »n euk/
 nji » v^{3/4}4^{3/4}m v^adqtpqnk f^aul gi {gptw^al^adcp 3; 42/dcp
 gi { o grgi pqxgo dgk per qp dgxqpww c x^atqu ner w/
 l^ap. Ai { n^aul qw. o k^avj c c t²ik fleu u^ai gu h²p{g A^atc
 hgrci {qi qwxqpc0

C Ockfcp/dc|^at cncuq{ j^a|cl^apcm ncr qu vgv k^a
^amcm c p n0 Ctewnev ut h^aj²t²u vctnc h^av{qn
 dqt^aqwc0 Oq|fwcvcpwn^amcm0 Pgo nk^anq|vc m
 o kpv c ngnwup²rlgp| h^athkcm qfcrpp c| we^ap0
 O knqt c|qpdc c rcuc rctk^al^av c Ockfcp/dc|^at
 hgr^a k^ap{^aqwc. cmqt xcw gpp{kgp jkvrgp rg²r/
 v²m h^av{nwnev < hgn^at^am ctewnev c j u gn w0 Gl c
 n^agi pci {qdd o gi ku|vngv²u. co ldgp h^athk c Mgrgvp
 t²ul guAnj gv0 Dqnj etc cuu|qp{ck ul^ao^atc Gpxgt o^at
 pgo ku h^athk jcpgo ul gpv<Cncj mAn^{3/4}vg xqn0

ô Gpxgt o gi²twgw. o kv lgrgpv gl c o gi ku|vgn/
 v²u0 Gij cv^atq|vc. j qi { o gi kpv o kpf gpv gi { ncr tc
 vgu hgn < ngo qpf k^aflc o gi j »f^au^at »n o gi x^ark m c
 dqngxkn^agm n²u c n^a|cf » dqnj ctkcm c| Ai {pgxg/
 |gw dcuo cf|ukm²n²tg^am²u f|uk ul^a2 dgp gi { Ai

dlkqfcm cv cmr ¶0 Gi {²pk²i²pgm xct^a|uc qn{cp
 pci { xqrx jqi { c dqugxknk^ancn nkp^agxg|gw dqn^a
 jctck o kpkul vgtgm o ci wn ku eucv^acnq|vcm jqi|^a. ô
 jqi|^a. c l³/4³p²m³rk r²p|vgrgp ul^ao |³4³vj³4⁰ Gij cv^a/
 tq|^am jqi { xgrg gi {³Aw ul³4³pn^agn⁰ P²j^ap { perrcn
 n²u dd Appgr²n^agu n^axcuo gpgv jci {vc gn c h x^atqu⁰
 Gpxgt v³4³m vku vgn^an^am^a nku xg|²tnetc²u c
 dqnjctck o kpkul vgtgm n²l²tg²dgp xcf^aul^acvc kpfwn
 c ujktcdfk ukxcvi dc⁰ Dqnjct^adcp perqnki. jgvnki
 x^atvcn fg ugo Gpxgt. ugo c o kpkul vgtgm pgo v²t/
 vgm xku|c⁰ Oguu|g. nkp c ukxcvi dcp. Gpxgt vcr^an^a
 nq|qw Kltcj ko dglgn c dcuo cf|ukm xg|²t²xgr⁰ P²/
 j^ap { perrcn n²u dd c dqnjctck go ¶. c v^axqrk J²t^av
 x^atq^adcp. m³4³p³4³u j^atv nerqw⁰ Kltcj ko dgl. cnk
²rrgp cmqt c| gi {km x^atev qutqo qnc. lgrgpv^ag
 w^apcn^ašC ukxcvi qp^av wcl km Gpxgt rcuc jwu qp/
 j²v v³4³m vku vgr⁰ Hqi n{wn glvj gvgo. jc rctcpeuq^aqf⁰
 Fg c|v^an²lc. jqi { c| K|n⁰o²tv cnet jcteqpk⁰
 U »rl. vj^av. » go ¶. o kv³4³v²pl²mxgr^a¶5

ô C| go ¶ qnu go dgt xqn⁰ Vwfvc. jqi { j^adq/0
 t^au vrcul vrcvqm²u j ukgu²i fqi^adcp ul²rgu g xk
 n^ai qp gi {gv^agp o qjco gf^ap ug jcuq^apf^aj cv» Gpxgt/
 jg|0 Gij cv^atq|vc. jqi { g|v nkjcul p^arlc⁰ M²u dd šC|
 gp{qo qw Dqnjctc jcpilcō e[¶] t³4³ktcv^adcp. nku²
 pckx o »fqp ul »tw^aul »tc gl v[¶]lc<

šO gi ¶vco Kltcj ko dglpgm jqi { c ner^alc xlg
 pgo eucm dlkqp{qu j^adqt^au vrcul vrcvqm^ancn tgpfgn^a
 ngl km jcpgo c j^adqt^aq| m³4³prgi gu vjgv^ai g ku
 xcp⁰ Gpp²rhqi xc o gi jci {vco Kltcj ko dglpgm jqi {
 km vku vgrvgn hqicflc⁰ Oqpf^alc o gi pgnk jqi { jc
 c o k Āi {Apn^atv ul^apf²nq| km jcteqpk o k o gi d[¶] wpm
 dgppg⁰ Okw^ap Kltcj ko dgl g|v c rctcpeuqv n²|jg|
 nervc. nev^aq^anev m³4³v ku nk o kpfgp k^ap{dcp.
 jqi { Gpxgt rcu^av o gi ngtgu²n⁰ Ogi ku vcr^an^am²u
 c| v o gi knv vku vgrvgn xg|gw²m Kltcj ko d³4³jg|.
 cnk hnu| »n[¶]qvc. jqi { p{krvnu||²n^a o km c ul^apf²/
 nckA Gpxgt ³4³o o gn x^arcu|qnc. jqi { gn³4³n^av ul^ap/
 f²ne gt kv c o w^awn^apqm tgpfgm²u²tg dqu^avcp⁰
 Gttg o kpf¹a²tv t^ad[¶]vco gi²ul jcfugtgi go xg|g/
 v²u²v⁰

ô C U qxl gwpl» nîp{vngp xqnv ngi lqdd eucr c/
 vkv 2u ngi lqdd jcf xgl 2t2v Htwp|g v dqtppnqv. xc/
 rco kpv Dwf lgo kk j fgu nqxcueucr cv v Vwtngu| v pdc
 mAf gpk j qi { Dqnj ct^a v o gi x2flg c| Àl. v nAm grht/
 fww gngp²i v r0 Gpxgt pgi {xgpp{qre »t^ap^a v jct/
 eqnv pqo^a flckxcn Dqnj etc x^atqu ncr wlc gn w 2u ô
 d^at Htwp|gpcu ukngt^{Av} o gi o gpvpgk o ci^av c x^a/
 tquv ô c nî4p{g| xkf²m t³4kf gup vglgugp Gpxgt
 ng| 2dg ngt^{Av}0

ô J^atqo j qu| À 2xgp^av vctvw Gpxgt jctec
 c Vwtngu| v p2tv0 J f|g/fleu u²i g c uxkxci dcp qn{cp
 pci { xqnv. j qi { c dAu| ng Qtej cp Rcf lc p2xxgn vku|/
 vgn²mo gi. cnkc v³4³mp²r gi { o qpfcdgrkj ug xqn0

ô C dqngxknkcm o kpf gp ki {gng| gvg. j qi { ng/
 xgtl²m c nî|cf^auv. gtgf o 2p{vngp o ctef v0 C dcuo cf/
 |ukm hcpv| o wuc 2u Gpxgt jcf kwf qo^ap{c uqtq| c/
 vqi { |gro gvctcvqwc x³4³u ugtgi gmhgrw0

ô Gmqt c U qxl gwpl» grj cv³tq| v. j qi { c jct/
 eqv o^aunfrrgp. ngrgvk o »fqp hqn{vcl0 Pgo c dcu/
 o cf|uknev. jcpgo eucm xgl 2t^{Av}ngv. Gpxgtv. cnetv
 gr wu| v|cpk0 G| gn c hgrcfwcn c wtngu| v pk I 0 R0
 W0v d^a v m o gi 0 Ngi vj gv²i gugdd Ai {p³ng. dgpp/
 u|^{Av}4v j^a|cnp^{cm} 3/4³xg. pgnkpf wv c uxkxci pcm
 j qi { Gpxgtv 2u xgl 2t^{netk} h jcf kul^a nî^u pcm jgn²v
 nîp{qo q| c0 Ukngt^{Av} ku o gi^a ncr f|cpk. j qi { Gpxgt
 v³4³m vku| vlgxgn 2u crki u^a| dcuo cf|ukd>n^am» hgf g/
 |gwgnc Xcm|U wtj cv hqn{» o gngwk Uctk|J kuul^at
 q^a|kuqp vctw| nqf kn0 Gttg j^atqo g|gt Dwf lgppk/nqxcu.
 dqnj ctek twj^adc d^{Av}wxc. grpf wv. j qi { o gi tq/
 j cplc Uctk|J kuul^atv0

ô 3; 44 cwi wu wu pgi {gf knîp Gpxgt nî4 gri
 r qthgrj v rkrp^vqw o gi c nî^vcv³tq⁰ C|qppen gn/
 xgwg v dqt^k r^vve³4²v0 C jcl^rq^w rpeug nku nî4²p
 ngtgu| v^{Av} vku| v³p nî^vcv^c. c u|cd^an^u|gt. nevq^au
 tgpfdgp x^ai v» nqxcu^ai qv0 šQtqu|qn⁰ ô nk^anqv
 hgn Gpxgt0 ô šQtqu| v^ocf^au⁰ Vku|vlgk gn ukwgn0
 C dqnj ctek xkugrv gngp²tg ku. rkrp^{cv}ki ugo xqnv
 nî^u2i gu. j qi { c p{cti crkc nî4 gngf eucr cv Gpxgt
 v dqtj gn²v nî^u|^{Av} o gi v^ocf^{pk}0 C v³4³nî4m n^{tc}/
 r cwcpv^{cn}0 šG| gn c v^{Av}gt xgn u|go dgp pgo xgj gv^{Av}

hgn c jcteqw^h ô nk^anq^aw^am kⁱcvq^wcp⁰ ô šC jg/
i {gm n^{3/4}2 ngm o gpgm^hp^hpn^h C v^axq^rdc^p v^ul^vp
tcl|qn^hf^vcm c| 2ⁱ j^awg^t2^{tg} c| chi^ap jcv^htjgi {u²i
eu^heuck⁰ O^{3/4}3⁴v^hAm c u|cdcf^ui k^pvgi g^vw⁰ Gpxgt
n^{3/4}pp {gf²p u^anv p {gtgi dg. rctr^a1^atc. co kv o²i c
dqⁿj ctckgo ^ht c^la pf²n^ul qwp^gm⁰

ô C u^a| dcuo cf| uk ku jctetcn^hu| gp x^at⁰ Vwf/
v^hm jqi { o k c n^{3/4}grgu²i ^hAm hgnctvcpk c| qtqu| qm
gnu v^ao cf» tqj co^av jqi { c| k^ugp^hgw rcuc n^{3/4}/
dgp c jgi {gmn^{3/4}2 o gpgm^hj guugp⁰

ô J cto kpe v^{3/4}3⁴m v^ul v x^ai v^uq^w c u| vgr^r2^p a^v
c jgi {gm hgr⁰ Nqxc^m n^hgi xg tgr ^hAm⁰ Gi {tg i {qt/
ucddcp n^{3/4}grgf vgm c jgi {gm o gtgf gm u| ^hAm^h hcn^h/
j q| 0 Gmqt Gpxgt j k^ug^hgp o gi t^apvq^w n^hxc |cd^h/
l^av²u n^u|²v hrgo g^hkg o gi^an^huv xg|²p {gm⁰ O ci cup
c u| k^ucv^hp gi { nku u| ^hAm^h hgr^j i qo qn^hi qw[<]
u^atc| qp rcvqi qw gi { i²r hgi {xgt⁰ Gt vgr^hgu o q|/
f w^ucn xku| chqt^hq^hvc rctr^a1^av⁰ N^avc. co kv c
v^hxq^rdc^p c x^{3/4}3⁴u n^hxcu^qm c| wqn^h» dcuo cf| ulckv
o²u^atqn^hm n^u0 šO k^pf gppgm x²i g. wtck⁰ ô o qp/
f q^w n^uo qn^hcp⁰ ô šJ cteq^hxc j c^hl w^hm o gi 0 M^hcv/
p^amxci {w^hpn^h

Hrgo gm^hgf gw p {gti²dgp⁰ f vj cv» vgn^hkv/
v²xgn c v^ul vgm u| go²dg o²n {gf v⁰ šMk c netffcn^h ô
xg|²p {gn^h 2^u ^hAm { 2^{tg}lg o ci^av o kv co kn^ht h^hevn
v^ul v n^ut^adcp c| gm^hpu²i gm^hgp xg| g^wg u| c^hnu^av.
O cegf »pk^adcp xcv { Vtr q^hku| dcp⁰ \ ugd²dg p { ^hAm⁰
Euq^fa^m/euq^fa^lc. qw vcn^hnv ku gi { r^at hgr²t i c^hnu²
n^u| v^l v o²i c Dqⁿj ct^adc xcn» dgxq^hpw^hu kf gl²d n⁰
Hgr^j ^hAm. gnko ^hq^hvc w^hlckp²u p^hgx^hgx^hg u| »nv q^hc j
v^ul vlg^hgm[<] šC eu^au^atk n^hxcu^atfc i c^hnu²n^u| v^l /
dgp k^pf w^hv^h o cf^a utc^h

ô G^h w^hp n^hj ^hAm 2^u hglg h^{3/4}3⁴v o gi uwj qi v^uvc
netf^la⁰ Gm^hn^hq^w o ci^av[<] šU c^hnu^l. k^p/f w^hl^h ô
J cto kpe v^ul v n^hi gn k c rcuc. x^ai v^uvc k^pf w^hv tq/
j co tc⁰ O gi v^ao cf^vm c| gm^hpu²i g^v< jcto kpe v^ul v
j^atqo g| gt qtqu^l v⁰

ô C jcf xg|²t o²i gi {u| gt 2^{tg}lg c jcte i {3⁴/
p {3⁴2 v ^hAm G^h xq^hnv c eu^au^atk i^atfc wqn^h» n^hxcu/
v^h

v̂ o cf^a uc⁰ Wqri^a tc hqn{v x²t c| ^amqo qtu^ai²tv.
 Vwt^ap²t⁰ C u|²n | Ì^auc n̂⁴gr gwg c vku|vgm gi {/
 u|gttg eucm Gpxgt j cpi l^av j cmqwcⁿ⁰ Gn u|^{3/4} eucm
 eugpf gugg. c| v̂ p o kpf j cpi qucddcp⁰ | pgn̂ⁿ⁰ C šLc
 U kō Mqt^ap/u| wt^al^av. co gn{gv c j cif qm»m ĥ^{4/4}v
 u| qn̂ⁱu² pgn̂^{ipk0} C vku|vgm ku^a vgw²m c f cmco qv⁰
 DĀeuĀ vcm c| ²rgw r⁰ C| gmgpu²i u|²rgu uqtck gi {tg
 n̂⁴grgdd p{qo wncⁿ⁰

ô Gpxgt n̂⁴2l^{Am} tqpvq⁰ Vku|vlgk n̂⁴xgw²n⁰
 X²tv n dqt[¶]wc tqunefv ^{3/4}u|g gi {km c o^aukm w²p⁰
 Gi { qtqu| qfchmtcmqf qw Gpxgtj g|⁰ C rcuc ctec
 o gi o gtgxgf gw<¶p g. kvc x²i⁰

ô C| qtqu| gi {gvrgp j cvcm cu eucr^auucn rg/
 u|gn̂ Gpxgt hgl²v²u den^am²v⁰ C j w²p^an n̂²u dd c
 Mqt^ap v vcf^an²n⁰ Vqx^add^a c| gm̂ qu| v̂ n{Ā p²o gv
 xcungtgu| v̂ v²u hrgu²i g. c j gtegi p cten²r²v⁰ G| g/
 ngv c I 0 R0 W0 pcm mĀf v²m gn Vcungpf dg⁰ Qw c| cm̂
 v̂ mn̂⁴2 ngt Āngm⁰⁰

ô Gi { qtqu| n̂²pf| u^al^atc u| Āvc c j u x²tdqt[¶]
 v̂ v̂c hgl²v⁰ Fcpcp q^a| kudcp c| w²p c| gi²u| gm̂
 m̂xcug| tgf o gi euqf^a rj cvc g| vc hglv⁰

ô C v̂ xqrk chi^a p x^atqudep. J gtcvdep. U| ckf
 Qrko n̂²p g| v ¶vc o^aupcr pcr n̂¹a dc< šGpxgt j uk
 j cñ^{iv} j cñv c Dcrf| upcp vgt Ārgv²p r̂x U²tk J ku^at/
 p^ar⁰ G| 3; 44 cwi wu| wu pgi {gf kn̂²p v̂⁴v²p⁰ Cmcj
 r̂i {gp kti cm̂ cu r̂m̂²pgn⁰ | p. Qrko n̂²p. u| k̂v²p
 i {^au| qm̂o v̂

ô 3; 44 cwi wu| wu pgi {gf kn̂²p c| qpdc pgo eucm
 Gpxgt rcuc²u gi { o ctqnp{ k eucr cv vku| v j cñv o gi⁰
 J cpgo c Vwt^apqtu^ai gu| o²lg. co gn{ c Dqu| r q/
 twu| p^an u| Ārgv²u Mgrgv Dqnj ctc j qo qn̂^{qu} ĥ⁴f/
 l²p hqu| m̂wugo o kx² 00

00 Guu| cf dgl o²i xcrc⁰ k n o gi hrgf ng| gw⁰
 P go eucm Gpxgt rcuc²u c wt^apk š^amqo qtu^ai⁰ j cñv
 o gi Mgrgv Dqnj ct^adcp. j cpgo c| c| go dgt ku. cnk
 O wu| vchc Mgo^an r cu^a pcm V^{3/4}3/4 ntu^ai Āl^a vgt go v/
 l²pgm r̂i k̂n̂²dd Āl^adcp^a m⁰ Gpxgt o quv n̂²r gw

3: :

uk xgv²n{^vtuc ²rg^vd n ²u Mgo^an o quv vgn^lgugp. xg/
v²n^vtu p²m^ñ cpcm u|gpvgij gwg o ci^av co k ²rgv
x²i u e²rlc xqn< c jcvcrjo o gi u|gt|²u²pgm ²u V^{3/4}
t^{3/4}nqtu|^ai o gi tghqto^añ^apcn0

V^{3/4}nqtu|^ai pci { nqtu|cnc o gi ng| f f^{3/4}0

KKOT! U\ 0
GI [M' \ Vf TUCUf I O GI U\ ©NGVKMD

Mqpuvcpʷpʰ r qnʰ. c| uk euʰ uʰ a txʰ a tqu. 3; 3: pq/
 xgo dgt jcto cf knʰ p gugw gr0 G| gp c pcr qp cpvcpv
 eucrcqm xqpwncm dg Mqpuvcpʷpʰ r qnʰ dc. cpi qn
 htcpek 2u qru| ncvpcuʰ i. o ci cutcpi Ā vku| vgmgn
 c| 2nĀnʰp0 Dctvqp igpgtʰ rku c htcpek. Y kuqp 2u
 Hwmpgt dtki cf 2tquqm c| cpi qn Rtgecw hgi cw
 ner kʰ p{ c| qru| eucrcqm o gi jcvcm c| qwlc0 V3/4
 nʰrgvu wf xctkuʰ i i cn xgwʰ m hgn c| 2tkpvn| 2uv c
 v3/4 3/4m jcv»uʰ i qmncr0 C h xʰ a tqu nĀnʰp dgp o quv oʰ a t
 gi {gvrgp. j kj gvrgp o 2tgv u| gi 2p{ pgi {gf dgp {q/
 oʰ a uʰ v vgw0 | nrgo. u| 2p. hc. rgw»rgwo gi {u| gt gp
 ugo o k ugo xqn0 O kpf gp grʰ a p fqtqn c p2i {2xgu jʰ a/
 dqtĀ a i {Āeuʰ xgkdg0 C nʰ4 r nrgf 2u ku o gi d2pwn0 C
 nʰ4 r qpvk jcvcm cm vku| vlgk o ci wm ʰIʰ a m j qi { c|
 weʰ a p f3/4 nʰ4v mwʰ a m j gxgtvm gi t2xgr< gl gm c Mqpu/
 vcpʷpʰ r qnʰ dcp o gi u| qnqv. nrg xgrv. c Mqtʰ a p rc/
 tpeuʰ d»n u2tj gvrgp a ncvqm pgo ner vcm gppk j»/
 pqr qnqp a v jwrcf 2nqv. o gtv c rncquʰ i pcm pgo
 xqrv o kv gppkg0 i { xgu| vgm 2j gp v3/4 gi 2xgr0 Gncnc/
 tʰv uwt»n ugprk ugo i qpf qunqf qw0 Xqrv o quv gi {2d
 i qpf ku0 Rku| qm d |. u| gi 2p{ u2i vgtlpi gw. co gttg
 c| go dgt c nʰ dʰ a vgw0

C h xʰ a tqudcp gi {gvrgp 2r ngtv. xci { rki gv pgo
 xqn< c nʰ4p{ gl xknrcp gi {gf gm rncvrcp qm xqncn0
 Pgo o ctefv c nʰ4p{ 2nrgp gi {gvrgp nku a tp{ 2nqv cf».
 nk pgo xʰ a i qw hc ugo 0 C Dqu| rqtvu| o gngw j ʰ gu.
 i {3p{ 3/4 rrcvʰ phc uqtv ku nixʰ a i vʰ m c jcv»uʰ i qm c|
 w»ddk kf dgp0 C uqm delj q| o 2i gi { »tkʰ uk v | x2u|
 ku lʰ a twm0 v xgpgl gt go dgt ngtĀn j ktvrgp c u| cdcf
 2i crʰ 0Ngi h dd kf glg xqrv oʰ a t dghglg| pkc jʰ a dqtĀ0

C rgtck ngtgu| v2p{ rncquʰ i cdrcncldcp xku| qp v
 Āf x3/4 n v dʰ a m nʰ4| 3/4p3/4vʰ m c hgn| cdcf ʰv»ncv0 C i 3/4
 t3/4. pgi {gf dgp šEkq Xgpk grqu| #b š! rlgp Xgpk g/
 rqu| #b nʰ r gm o kpf gpĀw0 C o qj co gfʰ a puʰ i r gf ki
 xku| cxqpwn jʰ a| ckdc0 C xʰ a tquk weʰ a nqp nʰ4 wf qoʰ a u
 u| gtlpv pgo hʰ t gn gi {gvrgp xʰ a tqu rncquʰ i c ugo c
 o ci c vrdgu rʰ v uʰ a oʰ a dcp0 i { c xʰ a tquk weʰ a m nʰ r 2/
 pgm c| c uclʰ a qu wrcf qpʰ a i wm xcp. j qi { c rncqu/

u^ai gi { v^{3/4}gf²n²xgn o gi v^{3/4}mg. Ai { hgugpgm o kpv
 jc c| gi²u/ rⁿqu^ai Āppgr gpg⁰ i { c| cpwcpv Āppg/
 r²n¹gu d^gxqp^wucnqt ku Ai { v^gu| gw. o kpv c o qj c/
 o gf^ap pgo ku xqpc c v^{3/4}h x^atqudep# C| cpwcpv
 j¹cf»h^grgx i²rgk r g f ki u| qti cm cucp rgtgi vgn
 c xk¹i uclw» n²r xkugn k o kpf gp^{Aw} l²p{n²r g| vgm²u
 1¹vcn⁰ C p²o gv n²kgw²i gp xqiv o²i p²j^ap{ pcr ki
 gi { nkugdd t^afl»n²u| Ā²m o gn¹ h¹iv c D²eud n c
 Nccgtdgtit n²u Pcwgp d n r^gcfqw j¹fgn^v ku⁰ G| g/
 ngp ngtgu| v¹n w¹vc o gi c M¹puvcp¹ r qn¹ dcp tg/
 ngf v n^{3/4}r qp^k f k¹mo^a ek. j qi { M¹tqn¹ nk^an¹ ²u Xk¹/
 o que¹u^at rgo qpf qwc| w¹cm¹f^aut»⁰

C v^{3/4}h j cw^ai qm²u o k¹ku¹ v²tkwo qm c| q¹dc¹
 vx^add o n^{3/4}pgn⁰

C| cpwcpveur c¹qm ku dgt gpf g| ngf vgm M¹q¹
 u¹cp¹ r qn¹ dcp⁰

C| we^am n²r g o gi x^anq| qw⁰ Cpi qn h¹cp¹ek.
 qru¹ u^a| cf qm o gpgv¹pgm k¹gi gp xg²p{u| cxcm
 j cpi| cpcm= c u| 1¹p^a| cm u²vc¹gt gm n^{3/4}3¹pu²i²dgp
 u t p dwm¹ppcm hgn c |^{3/4}f gudctpc twj^al^a cpwcpv
 u| 1¹cu k¹gi gp vku| vgn⁰

Dct^au^ai qucm l»k¹fw¹v¹cn⁰ Eucm^ai { Ā¹km eu^{3/4}kg
 pg o gtgf g| p²m c nk^{1/4} h^{3/4}4¹00 C| gi { gu¹v cp/
 v¹ph¹qwc t| kc h x^atqu tgp¹l²v²u p{ w¹cm^av⁰

O wu| vch Mgo^an r¹cuc c h¹vcn v^adqtpqm gddgp
 c| k¹dgp o^at pgo v¹rgu¹v cm¹k u| qn^arv¹q⁰ Ukurk¹
 dgp r¹nk¹ M¹puvcp¹ r qn¹ gi { km m¹rk^atqu^adcp⁰
 M¹u dd c| v^ap^a v¹n^{3/4}4¹km Rgt^adc. c| gn ngn R¹cc¹eg
 J qv¹nd⁰ H¹g²u²v tgp¹gugp n¹rlc. l²rtg¹gw r²p| g²u
 nkugdd xci { qpc ku xcp⁰

O k¹gp¹nk w¹lc t»r. j qi { tgp¹n¹k¹ Ā¹n v¹j gw²i gu
 go dgt⁰ | t¹fgnu. x²n¹p{. eugrrgv ugo^{3/4}gi gf gw
 cr¹nlc. o ci cuj qo r¹m¹ n²mu| go h¹lg o k¹gp^{Aw}
 h¹rv pkm cj qn c j c| c l^{3/4}kgpf uqtu^av v^ati { ci^an⁰
 D¹rt o ci c n¹v¹pc. pgo n²r xkugn. o²i ku c r¹trc/
 o gpv net| cvk¹ ²u h¹qn¹qu»k¹ uqm| qt o gi l¹rgpkn⁰ K¹v
 šw¹xctō xgu| k n^{3/4}Ā¹= o k¹gp¹nk h¹i { gn c u| cx^atc⁰
 r g f ki w¹lc g| v o ci^at»n²u c l^{3/4} go dgt²pgm
 cvo qu l²t^al^axcnxgu| kn^{3/4}Ā¹no ci^av⁰

Mgo^andcp n¹dqi c x^ai { . j qi { x¹cr¹o kv eugr¹ngf /

lgp= 2t| k j qi { o quv x²i tg gr^{3/4}v c| kf glg⁰ Eucm
 j qi { gi { gn tg o²i pgo wflc ki c| k^Δl^a v⁰

Mqpuvcpvp^a rqn{ m^Δnu n²r g gi {²dn²pv p{wi cn/
 o cv o wcv⁰ C| Q| o^ap/j^a | XK⁰ Oqj co gf ul go²n²/
 dgp o c ku tgpf ^Δngv^Δp^Δn wtc^Δmf kn⁰ C v^{3/4}3⁴m n^{3/4} ki c| /
 i cv⁰ u. v^{3/4}x²p{ng²u. rct^Δco gpv ku o n^{3/4} kn⁰ f o c|
 qtu^a i v³xq^Δrddk t²u| gkdgp. m^Δn^{3/4}p^{3/4}ugp c| cpvcpv
 ul go g gn n dk^Δvpu^a i dcp r²x Mku/f| uk^a dcp. ul gtxg| /
 n^Δgfpgm v^Δsqndcp c j ctejq| ul qn^Δq. h²rki n^Δgul g^Δgn.
 hgi {xgtgngvtglvgi gv v^{3/4}3⁴mn^Δv^Δpcvku| vgn⁰

N^a dj q| vgw hgi {xgttgn² n^Δgu ul go o gn hki {grpgm
 n²v^Δh²r⁰ Gi {km k^ap{dcp c| qtu^a i i^{3/4}3⁴ 2u 3⁴o²p{
 nk^Δgddu²i²tg ô c j clfcp qn{ uqnev ul gp^Δxgf gw. fg
 nk^Δvj cv^Δrpwn² n^Δgn²r gu 3⁴o²p{ c^Δv^Δxcn^Δm o c ^Δl.
 pci { dk^Δqfcm⁰ o gi v^Δtgo v²u²t n^a m^Δqf q| pcn^Δ c|
 cpvcpv r^Δtq^Δgm^Δt^a wuc c^Δv^Δw xcn^Δ 3⁴o²p{ 3⁴p^am^Δu^a i /
 t^Δn^Δ c i 3⁴3⁴ 3⁴m wi {cp^Δgm^Δt Pci { J gn^Δul t^Δn^Δ ô c
 o^aukm k^ap{dcp. c o gi n^{3/4}4gp^f d²n^Δgul g| f²ugntg
 hki {grpgmc nk^Δ | ulckvku| vgn⁰

C pci {x^atqunev. Dci fcfqv Fco cul m^Δul v.
 Cn^Δrr^Δv. lgtw^Δu^a rgo gv. Oquul wv ô xgn^Δm gi {^Δv
 gi { uqt o^au qtu^a i t²u| v ku ô cpvcpv euc^Δcvqm ul^a m/
 vcm o gi = J gf| u^a ul. Ct^adkc. M^Δwfku| v³p. Vtcpu| /
 lqt^apkc. R^Δngul v^Δpc. U^Δlc^Δ gn^Δ c^Δnf^auucn hgp{gi gv⁰
 C| q| o c^Δprk vku| v v^{3/4}3⁴m²i h^Δrcf^Δcv. jqi { gl^Δgmgn c
 xgul gf^Δgr^Δgmgn ul go dgp²|| gp ô 2u. jc n^Δgm n^Δgul^a /
 o qrlqp⁰ G| v wfl^a m Mku/f| uk^a dcp. cj qn Mgo^a n^Δpcm
 o c ku uqmdc^a vlc xcp⁰

G| c| c j gn| gv. co gn{ t^{3/4}kl^Δgugp c| v hqi lc g^Δgf /
 o²p{gl^Δpk jqi { c dk^Δqfcm⁰. c eu^aul^a tu^a i 2u o k^Δ /
 fgp co kv^Δcf^Δlc^Δ 2u qvqo^a p. 3⁴u| gqo rkn⁰

C i { | vgu cpvcpv r^Δq^Δrk^Δkm^Δwck 2u rctc^Δpeupqnek ô
 Mqpuvcpvp^a rqn{ dcp j^atqo h dk^Δvqu rctc^Δpeuqn o quv
 ô uqtq| cvqu j k^anev n^{3/4}xgvpgm gn c o ci wm n^Δt^atc⁰
 Uqtq| cvqu v²xgf²ugkn^Δ n c i { /v^Δu Qrcu| qtu^a i m^Δn^Δ /
^ΔÄ {o k^Δku| v^Δtg n²u dd²tv^Δng^Δ|²uv ku ^Δlv. gl| gn c e^Δp /
 o gn^Δ šO kn²rrgp xgu| v^Δw^Δm gn c j^adqt^Δv V^{3/4}p^{3/4}m^Δ
 qtu^a i i cnu| go dgp A^Δ

C| cpvcpv o gi d^Δ qwcm gnu j k^alc< c x²i n^Δgi gu
 j cv⁰ to gi^a n^Δrc^Δ 2u qtu^a i qul v^Δ d²ngv^Δ ti {c^Δuqnev

ô euvrc jcv³tq|cvrcpu^ai d»n ô grj Ā v³m n²v²xki
 ô c/w^ap o^at pgo ku wf³m x²i tgj clvcpk o gtv
 n³/4 dgp c j cf ugtgi gkmrgul gtgrn⁰

O^auqf km j kdc< pgo i qpf qunqf vcm c v³/4³/m j cf/
 ugtgi c| qppcrk vrgu rgul gtgr² u²t n⁰

J cto cf km cpvcpw| go r qpvd»n xcn» o wrcu| v³u<
 o gi jci {v³m c t²ik v³/4³/m r qn^atk² u ncvpck n³/4/
 ki c| i cv³u⁰

Co knqt c| v³p j³g o gpv. jqi { Mku/f| ul²dcp² u
 Cpcw»rk^adcp hgmgr²utg n²u| Ā p³gm c o²i hgi {xgtdgp
^am» eucrcvqm c| cpvcvdk²qwu^aiqm c v³/4³/m nqt/
 o^ap{j q| hqtf wncm< i qpf qunqf l²m c eucrcvqm c| qp/
 pcirk rgul gtgr²u²t n²u n³/4³/m j c rcf²mcrcpwn c t²u|/
 rgvgtgf o²p{vc u| ³/4gw²i gugmgn⁰

C v³/4³/m nqto^ap{ o gi ku vgw c o ci^a2v< Ā
 j cf ugtgi rctcpeupqm^ai qv n²vgu³gw Mku/f| ul²dcp.
 c| cn c e²mcn jqi { c šj gn| u³pgp tgpfdg| q| c c
 nku^a| ulck vctqo^ap{qm j gn| gv²v² u j c rcf²mcrcpwn
 o gi vgi {g c u| Ā n²i gu kv²| ngr²ugmgn⁰

Gppgm c v³i n³/4 o gi d³|^aupcm vrgu³v²u²tg c|
 Ā qppcp nkp³g| gw rctcpeupqm o²i m³/4 p³gi gu hgn/
 j cvm c|^auqnevku ner qw⁰

C nqto^ap{ c j cf Ā i {o k³ku| vgtv d³| v o gi c
 rgi hgn dd hqnp xcn» tgpfdg|²ugmgn⁰ C ncdkpgv/
 h p³/m F| ugxcf ruc c| qpdcp. gi {u| gt gp ugo o kdg
 ugo xgw c o k³ku| vgtk wcu³v³uqnev. co gn| gm ô
 co kv l»n wf v ô eucm i tco qh³p³go g| gk c| cpvcv
 rcf^au^apcn⁰

C j c|^al^av l²iv² u gt u ncvpck u| gmgo v n^avj c/
 vqw ncdkpgvh p³/m p³gm gu| g^ai^adc ugo xqiv rgul gtgn/
 vgo c pgo| gv k nku^a| ulck eucrcvqnev⁰ C| gi {gf Ā kg/
 ngv. co gn| gmo²i o kpf ki hgi {xgtdgp^amqwcn⁰

L»n wf v. o kv euk^an co knqt c rctcpeu x²itg/
 j ch^au²tc c u| qn^arcvqpn³Ā k luo gtv v^adqtpqnv
 cl^aprqw< O wu| vlc Mgo^an c Fctfcpgn²m j u²v⁰
 C| cpi qn J ki j/Eqo o ku³qpgt nku² o gi eu>x^anc c
 hgl²v ô pgo qn| cuo kv j cmqw gtt n c| go dgtt n
 j qi { xcn⁰ gt²u hqtcfcm^atA ô Fg co knqt c v³/4³/m

na^o p{ o quv l»^v n^v v³ dqt² p² qm² tv. wf xctkucp dgrg/
gi {g| gw c| kpf² x^a p{dc0 L». o gplgp gl c Mgo^a n Mku/
f| ul^a dc0

J c wf vc xq² pc. o kveul^a ng| | gnc r² r² u² xgr⁰⁰

00 O² i gi { x² i u cwf k² pek. co gn{gp Mgo^a n
dk vqu² lc c u| w³ pv. j qi { šo kpf gpv o gi hqi vppk
c j c| c p{wi cm c² u dk vqu² i c² tf gn² dgpō ô c|/
w³ p o gi kpf wn c v³ v² pgrgo rrlctc v³ v³ m kf ntg
dgrg² v² v² p0

G| gtnk² gpeu^a | v² k² gpnk² gpe o^a lwu v² k² gpj cvqf kn² p
hwqw nk c šRcpf gto cō pgx nku i |³ u c nupucpv²/
p^a rqn{ k nkn² v² d n0 Hgf² n² gv² p qw^a m c| Āl nku^a | ulck
j cf ugtgi rctcpeupqm² u dk cm cu vku² vknctc0 C xlj c/
tqu Hengv² v² pi gtgp. c rctvqm o gp² p vctv c j cl»
Uco uwp nkn² v² x^a tquc hgr² 0 Gi² u| nku r² x² n² ttc xcn»
o gi j cvm c|^a u. p{² v rctcpeu² u tgp² fgrgv x^a tv hgn/
j cu| p^a r^a utc. nku xcun² | gw^a dcp. c v³ dqt² p² qm ncl^a v/
l² dgp0

O wu| vchc Mgo^a ipcm o² i ettc ku xq² v i qp² lc.
j qi { o gi^a ncr qf l² m c det^a v^a xcn c j cf Āi {o k² ku|/
vgtgn gi { vknqu v³ xk² vk n² v² eudcp. co gn{gv pgo ku/
o gt ugpnk telc² u c o k² ku| vgtgp n² k² Āi0 Ugnk² p² gm c
xk^a i qp pgo u| cdcf wf plc. o k^a m c j cf Āi {o k² ku| vt
² u c nku^a | ulck j cf ugtgi h rctcpeupqm gi {o^a ucn x^a n/
vq w^a Āi gpgp² gv² kdgp0

O^a t c j cl» g² k² pf w^a u^a v n² v² k² gv pcr qp. o^a lwu
v² k² gpj gv² f kn² p. o gi ngr vknqu lgr² p² v² u² tng| km c|
cpi qn h dk vqu ng|² j g| 0 Gppgm n² v² k² gvng| o² p{gn² r/
r gp xcrc o gpp{ k v³ v³ m nkn² v² j cv² u^a i u^a Āi³ p{tgp² f g/
rgv ncr < j c gi { O wu| vchc Mgo^a n pgx v³ dqt² p² qm
qf c² tng| km d^a to kn{gp v² to² u| gv² u² d^a tj qppcp
u^a to c| » o gi j cvm c|^a uqnev o wcv ku hgn< c| qppen
hgn ngm vctv² | v² vk² u² M² quucpv² p^a rqn{dc xku| c/
u^a n² k² cpk0

C tgp² f gm² |² u ô V³ v³ m² tu^a i dcp o gi guk m c|
kn{guo k ô gm² ugw0 C šRcpf gto cō² u xgrg O wu| vchc
Mgo^a n p² j^a p{ »^a xcn gn dd o^a t gn² k² gv² c rctvqm
o gm² w² u v² r² gu i || gn² tng| gwo gi Uco uwpdc0

J qi { c j cl» wcuck ul^a o ¶qwcm gttg c hgnct/
 w| cv³ uk rctcpeutc. n¹ ul km cdd»n j qi { o² i c j cl»
 grtqo nqw k^a p{v l² v ugo lcx¶wcv³ m o gi xcrc o g/
 n{km nkn^{3/4} v dgp. cpp{ktc ulgwgn0 K^a p{v p² m¹ n² t/
 ng| vgm o gi e² rlvnj q| 0 Mgo^a n o^a t cmqt vku¹ v³ dcp
 xqrv c i {qtucu¹ i gn p{gkxgn co gn{gnv xcn¹ l^a dcp
 eucm gi { j Au¹ 2xxgn n¹ u dd kpf wv j^a dqtA xgl gv k
 kuo gtvgmhgnf^{3/4} pv lgrgpv u² i pgn0

Uco uwpdcp o^a t x^a tv³ m c pgo | gvk eucrcvqm hgn/
 ngn¹ utg n¹ ul xgl² t² gk0 Flcf cn¹ v xqrv c| A¹ lc c x^a tqu
 dgnugl² dg< V^{3/4} 3/4 n¹ m² u ngtgu¹ v² p{gm gi {ct^a pv ul cdc/
 f ¶» lwm¹ pv A¹ x^{3/4} 3/4 n² mc pgo | gvk¹ dqtprnqv0

Mqpuvcpv^a r qn{dc u¹ ti^{3/4} { 2tng| km u¹ ti^{3/4} {
 w³ p< c j cl» qw l¹ tv ô . fg o^a t gn ku kpf wv. o ktg c
 hgnctw| cv³ ukr ctcpeu x² i tgi clj cv» r¹ gw xqpc0

Mgo^a n vj^a v h¹ r¹ gw c m¹ A¹ f gm gv0 C| gm i { /
 | grgo r g f ki o^a tku c| 3/4² xqn0

Mqpuvcpv^a r qn{dcp g| crw wi {cpeucm o gi /
 i {qtuwn c v^{3/4} v² pgrgo ngtgn⁰ C| cpvcpv o quv o^a t
 n¹ 4 rk c x² i n¹ gi gu d² n¹ hgn² vrgkv ku0 D¹ v¹ gv² u. o² n¹ /
 p{qu¹ i. j wo c¹ k³ u² u n¹ t¹ r¹ nj g¹ v¹ gv¹ p² i m¹ v¹ p^{3/4} u xg/
 i {A¹ n¹ g| c| qnktcv< l¹ mgo | c pci {m¹ v¹ A¹ l¹ A¹ gn/
 r¹ pl¹ r t¹ g0 ô Gi {g¹ v¹ j k¹ l¹ c. j qi { pgo kuo g¹ k¹ g¹ i i²
 c p² r gv co gn{p¹ gm¹ utuc hgn nj cv³ tq| 0

Gi² u| qtu^a i qm ul cnef p^a pcm r¹ g pppgm² tv¹ gm² /
 dgp V^{3/4} 3/4 n¹ qtu^a i v¹ gv² t n² u ngt¹ v¹ p¹ gm o k¹ pv R¹ cvu /
 v¹ pc U¹ ¶lc u¹ d0 c| cpvcpv j cvcm cm A¹ {p¹ gxg| gw
 o cpf^a wo c c¹ n⁰ O^a uqm r g f ki. o k¹ pv J g f | u¹ ul. K¹ cm
 Ct^a dlc. M¹ v¹ f ku¹ v¹ p. V¹ t¹ cvu l¹ q¹ t^a p¹ k² u ¶ { v¹ x^a dd.
 3/4^a m»^a mco qm r¹ p¹ p² pgn0 Cpi rk o² i c| v ku nkn^{3/4} k
 j qi { c v¹ pi gtu¹ qtquqm² u o ci c Mqpuvcpv^a r qn{^a n¹
 r¹ pf»cp p{ kxc^a n¹ l¹ q¹ p gn v¹ g0 X¹ O qj co g f ul w¹ v¹ p
 o k¹ p¹ f^{3/4} u| g j² v¹ u^a | v¹ gv tv n¹ r qw. c v^{3/4} d¹ dk n¹ v¹ p^a v r¹
 n¹ gm ul g¹ t¹ gn¹ v¹ p¹ k¹. u v c n¹ r k¹ w¹ e¹ k¹ n¹ v ku xku¹ c^a n¹ v /
 l^a n0 M¹ c¹ r¹ m¹ v¹ vj^a v c pci { v^{3/4} 3/4 m¹ r¹ tqd¹ r¹ o c. co gn{
 o quv n¹ v v¹ d¹ q¹ t¹ c qu¹ v¹ c| qtu^a i qv0 X¹ O qj co g f
 ul w¹ v¹ p² u c n¹ v¹ p| g¹ t¹ cv¹ x¹ qm c| cpi q¹ m l» k¹ p¹ w¹ v¹ /
 pcm grp{gt² u² xgn c pgn¹ km l¹ w¹ cv¹ w i c f cu¹ i k² u r q /

rkknck gn p{^{3/4}mgn rgj gv rgi c t²i k q| o^ap ^{3/4}u| dktqf c/
 nqo ngtgvkv cnetl^am c l^{3/4}x tg o gi o gpvpl⁰ U| go dgp
 gl| gn c r^apwt^apk^o wuucn c o^aukm v³dqt^a n¹ur qpvc<
 k¹n¹dd rgo qpfcpk c xk¹i v^{3/4}v²pgrgo uqt^ap o gi j>f¹
 vw vgt¹rgvnt n²u eucm c u| qtqucp^{x2}xg v^{3/4}^{3/4}m¹a¹/
 vcn rcnq^w vgt¹rgvngv vtcvck o gi ô wrc¹lf qpn¹r rrgp
 v¹j^av eucm Mku/f| uk^av²u U| vo dwn⁰ G| v c| qpdc
 o kpf gp m¹n¹f¹/f kdghn¹a²u¹i {^ao nqf^au p²m¹n⁰

C u| w^apk wf xct cpi qn u| wtqp{qm n^{1/4} gr gw² r⁰
 M^{1/4}dgp c=i^{3/4}^{3/4} eucrcqm ô gl gm c| wqn> r gtedgp
 dgcxcv^u| qw gmgphrgm ô 3; 3; o^alwu 3; /²p nkn^{1/4}/
 pgm U| o k^adcp²u v^{3/4}^{3/4}m vgt¹rgvngv u¹ n¹pcm o gi 0
 C d²nghn²vrgngv šj clv^am x²i tg⁰ C i^{3/4}^{3/4} ^{3/4}ndgp
 m¹n¹/pdgp ku o gi dqe¹lj c^wvcp pgo| gk jctci i { n
^{3/4}u| g c o qj co gf^a pqmⁿ u| go dgp⁰ C o gi u^am> i^{3/4}
 t^{3/4} n^vqpcu^a i d^a pvc^o c| c c o w| w^a p¹qncv⁰ C|
 cpvcv eucrcqm ku^a m¹cpf>cp Æ| vgt¹rgvngv xgu| pgm
 štgpfeuk^a n¹ uwn⁰ j cv³ un^{1/4}² dg⁰

O kv euk^an g| crcw c Mku/f| uk^adc² tng| gw Mgo^an
 v³dqtpqmA

C rgi Æcdd nqt v^{3/4}v²pgv²dgp c| v q¹kc^uw^wk
 šO w¹ vhc Mgo^an o gi u| gtxg| v³ c| gr¹i gf g^vng¹gf /
 ngv²u²n¹ng^a nq^wô

C xcⁿu^ai dcp g| pgo o gpv qn{cp gi {u| gt gp.
 o k¹vcj qi {cp c v¹pn^{1/4}{xgmo gi ¹l^an⁰

(00) Mgo^an U³o uq¹dc² tng|²ug w^ap gi { r krc/
 p¹vc ugo r lj gpv r⁰ O gi² tng|²ug p¹cl^a vⁿ Æi {u| >n¹
 x^ap hq¹v¹q¹ucp Æq⁰ xqⁿ⁰ Ngj gv rgi u| go² n¹gugp
 ngtgugw² tk¹vng|²uv c o gi nkugdd¹gw r¹w^ao Æ hgi {/
 xgtgkm l>t²u²v n o gi hqu| vw. fg d^avtu^ai vⁿ ²u vgw
 x^ai {vⁿn¹pi qn> v^{3/4}^{3/4}ng| tgf gm rctcpeupq¹a¹xcr⁰

M¹n¹/p¹ r¹vq¹cwc uq¹tc c v³x¹>v¹u| vngv ku⁰ Vku| /
 v³dcp xq¹v xgrg. o gpp{kg u| Æn²i gu c hgmgr¹u u^a/
 o^atc g| gnpgm gi { Ævo n^{1/4}²ug ô j ku| gp Mku/f| uk^ad>n
 c| qtu^ai u| ¹k²dg. M¹qucpv¹p^ar qn{dc. g| gt nkn>o²/
 v¹tp²n j quu| cdd v³x¹>xg| gv²m hww= ô c o^aukm n^{1/4}rg/
 ngf²uk rgj gv u²i pgo u^ao ¹v. o gtv c dcifcf/cpcw/
 rckxcu¹xqpcnc o gi u^am> cpvcvng|²dgp xcp⁰

Mgo^a n rcl^vndcp. hcnwuk kunqⁿ2r²Ängvmdgp j^a n
2lu|cnf²pnf²p^v= nq^eukp. n²j^a vq² l^atlc c| Äwcrep jg/
i {gngv0 P {qo qtÄ^ai qu nk^a|ukck hcnxcm hcnwuk d²f^ak/
xcn² rrgp Äi { u|»dcgngi {gf gw c rqrkknck jgn|gv
hgn n o kpv c j c|^alwm uqt^ap² u h ngi c o ci w²ni gi {2pk
dclck o kw gi {h²to^a p gmgugt²gf gw hk²gv²uvrgp
vku|vgngr0

Gi {2pk²i²dgp. u|»n²u|u²i²dgp² u h n²r²rgp
tgp²f²ij²gvvrgp jk²dgp jkxc^vuc hgn n qn²cp o gi/
i { | gt xcp. jqi { cnkxgn eucm gi {u|gt dgu|²nv²rg/
v²dgp<j²k²x² u|gi fkn0

C| ci i qfcm cunqf»nev cxxcn p{wi vclc o gi < c
nqto^a p{ grhqi c^vrctcpeuc eucm ch²rg vgu²m/n²u²m
n²p{u|gtlv²|ngf²u xqrx c| cpvcpv p{qo^au^atc0 C|
cpvcpv go n²ug u|²i {gppgn² u i { n²rgwgn v²nk gn c
Fctfcpgn² m c ukxcvi k j^adqtÄm c p²mÄ²4²ugm² u
o gi c²f²|^auqm j u²gk0 Mgo^a rpcm kw o kpfgpÄw p{gtv
Äi {g xcp0 M²kgv k pgo eucm c pgo |gk o gi o q|f w²u
pgx²v²l²a m|^a u|n²lwntc. jcpgo c| 3/4²vku0

C nq²u²cpv²k² rqn²k nqto^a p{ r²g²ki o quv ku²v
gm²4²gv²p²j^a p{ j k²a² v0

C| gugo² p{gngv uqmu|qt r²g²v²m o^a t0 G| gm jg/
n²gw vj^a v n²u²tgrÄm o gi kpn²dd c| gugo² p{gm
qnckv²xku|ccf p0

Gru jkdc c v²4³4³m v²4²x²p{gu nqto^a p{ u|go rqp^v
l^ad>n< d^at jkxcvcmqcp xku|ctgpf²gng Mgo^a n² o gi/
2²tng|²ug w²p o²i ugo hqu|vc o gi jcvcm^a w²r0 Hgn
pgo vctw²|vclc. jcpgo hci {lc. jqi { u|cdcf qp n²4/
r²ngf l²m Mku/f|uk^adcp0 O^a uqf km² u o²i pci {qdd
jkdc. jqi { co knqt o^a t c vku|vnet. c r²cnqu^ai. c rqn/
i^a tk jkxcvcmqm xglgv u²i g u|k²xgn n²rgnngn Mgo^a n²<
cmnqt cf nk gmgpg grhqi c^v rctcpeuv š rctcpeu/
u|gi gu² u hgn² i^a tw² u² o kw0

C jcto cf km jkdc< c v²4³4³m nqto^a p{ rgnk²ukp{gn/
vg Mgo^a n cnek²l^a pcm jqtfgtgl²v ô v²nf p Äi { k²ng
o gi. jqi { c| gi { gr²i gf gwrgp ngm o² n² p{r²udcp
pgo t²u|guÄ² vku|v n²|cfq|^a uc hngddxcn>k gmgp ô

j c pci {qp ku o guu| ktg o gi { . o clf o²i kf dgp o gi /
dĀpvkn0

P gi {gf km j kdc ku xcp< c| wtcmaf»²u nqto^ap{
j co ct gñgñlgvvg. j qi { K Cdf wn C| k »c. eucm
gi {gvvgp v³/₄³/<sub>m u| wv^ap ngtĀv rg c v»pt»n c| qp c
vgo²u| gvgu o »fqp. j qi { ³/₄³/<sub>m ^anqo tc j wp{v u| g/
o²v ô gl c| gi { ku vñ^ap eucm c|²tv. o gtv kf gl²dgp
v²tv c u| fdc0 Mcvqpc rweeupcm eucm jcu| p^atc x^arv
c j^adqtĀ i {cnqtrv²u c j^adqtĀ w^apk o gi r| wv
n³/₄ ki c| i cv^au< ô gl| gn c t²i k v³/₄³/<sub>m v²vgmgn ugo u^a/
o qncmMqpuvcp^arqn| wtk0</sub></sub></sub>

C| v^ap o²i gi { ³/₄³/₄ km j kdc ku hñj q| j cv»< c nup/
ucpv^arqn| k wtc m o gi grⁱ gf vgm c Mku| f| uk^ad»n²t/
ng| < uĀi³/_p{³/<sub>m r^aw| »rci n^la rku j cpi l^axcn²u pgo
ngtgu²m o k tglv| km c xcm^u^ai dcp c o gi p{wi cv»
²tvgu^u ugmo ³/₄ ³/₄vA</sub>

O²i hñ{vcvk ngj vvg c j kd^am uqt^av co gn{gnv
c v³/₄³/<sub>m n³/₄rqpvk wtcnqo gmnqt c o ci c tqx^au^atc gn/
n³/₄kgvgw0 Fg Āi {r^aw| km< c h j kdc gi {u| gt gp c|
xqrv j qi { cnkv c| kuvpgm rvw| wv^autc u^apvc m c| v
o kpf gpgmgn wxcm^ai i cnxgtkmo gi 00</sub>

J q| |^al^atw n c j gn| gv nñgn f²u²pgm ukvgv²u²/
j g| o²i n²v o^aukm v²p{g| ku0 C| gi {km j qi { c v³/₄
t³/<sub>m ²tvgm k²i eucm nñi Ālcedcp ²tvguĀn c xgtuckgu^u/
²u o^au d²ngn³/₄ ugn² n vj^av j k vvgp ²dtgf cppcm
wfcv^atc o k ku x^at c| qtu^aitcA C o^aukm j qi { c
v³/₄³/<sub>m nqto^ap{ uqtte o q| f^ulc gn c Mgo^ancn tqnup/
u| gpxg| h v^u| vxkugn ngv. c šj cf ugtgi /h rctcpeu/
pqñ Mgo^an r gfk i o gi j ci {lc ngv^an²uckndcp0
G| gm o quv o^at ô c o ci cu nqto^ap{ l»xqn^ad»n ô
gi {v n²gi {ki Mgo^ango dgtgk0</sub></sub>

XK O qj co gf. c Mku| f| uk hgn n u^anupi ». gi {tg
j cv^atq| qwedd j^ugn^u n x²i tg n²p{vrgp wvqo^auwn
xgppk j qi { qf crgpv plpeu o kpf gp qn| cp tci {qi »
tgpfdgp. co kv c| ^ancpf»cp²tng| uĀi³/_p{³/<sub>m ^an^u/
l^an0 C x^ark m c j gn| vctv»m c vctvo^ap{h p³/₄n³/<sub>m cñ/
| cvqucp. fg n³/₄kgvng| gvugp u| cdq^ar^am Mqpuvcp^a/
p^arqn| rctcpeuckv ô qn| cp gr²tj gvvgp v³xqn^ai d»n
j qi { o²i gmgp tk pkugo ngj gv ngv0</sub></sub>

C u| wv^ap gffki ugo o kv ugo vgw< o quv pci {qp

ku uqnev cnet vppk< jcfugtgi i gn cnet c nku^a| ulck
v | x²u| gm grk^a t^a u^a tc kpf wpl# M^a v jcf qu| v^a n{ hgn/
^a n^a u^a tc n^a t gpi gf² n{ v c| cpwcpw»n ô ²u pgo ner/
lc o gi 0

C u| ³/₄gw²i gugm c| qpdc p c| gn n ku o gtgxgp gn/
|^a tm>| pcm j qi { m o ci wm vgi { gpgm xcno kv c hgn/
ng^a u grhql^a u^a tc0 U ki qt^a wcu^a uckm xepcm R^a/
tk ud»n ²u Nqpf qpd»k pg cxcvq| | cpcm V³/₄³qtu|^a i
dgnu Ñ { gkdg 00

ĩ { c| v^a p pgo uq^a tc o ci wm ngt^a pgm o clf
u| go dg Mgo^a nu| wtqp { cxcv

Mgo^a n rtqi tco o lc gi { gn tg< o gi o gpvpk c|
uk ³/₄³mc mc vt^a vgv. ô cñt c| kf gi gpmc v^a/
xqredd gu rtqxpek^a m hgn^a r q|^a u^a pcm^a t^a p ku0 Gtt n
²u o^a u. o² i ci cu| »dd hqtcf cm k lgrpu² i gnt n
u|^a o qpcmdg c u| w^a ppcmc nku^a | ulcklgrpv² ugn0

C| cmqtk dgn^a { o kpu| vt Mgo^a n Crk ô x²gv/
rp^a n v ku Mgo^a pcm j^a v^a m ô c u| w^a p hgn^a cvn/
o c|^a u^a xcn n^a r^a xgrgv cf nk co gn{ dgp j kxcvqucp
ku o gi d² n{ gi | k Mgo^a n O wu| vhc r cuc v^a dqtqpm gn^a/
t^a u^a v0 N² p{ gi² dgp o gi kuo² vk c uco uwpk wcl^a u cn/
nro^a xcnnkcf qwrgvt»| cv» r ctepeuq0

Mgo^a n gttg c| ko o^a t gi { gf^a n pgnk gpi gf gm gu/
ngf nku^a | ulck qtu|^a i t² u| gm n^a r xkugn kpgm ³/₄ u| gj^a /
u^a xcn hgn0 C u| w^a pk n^a to^a p{ o quv o^a t p{ hcp
n^a | cf» pcm d² n{ gi | k Mgo^a n jcfugtgi r ctepeuq^a v² u
Àcdd grhqi cv» r ctepeuqvcf nk gmpg0

C j cvnqo p² m^a n o ctf v u| w^a p ucl^a u^a i qu.
ner nqf» rt>d^a m^a |^a uqndc ng| f0 Crk I j crkd dgl. xqrv
g| tgf gu ugi^a u² i² xgn cnk nk v p kuo gt lg c nku^a | ulck
p² r r^a rmpgm o gi rt>d^a rlc Mgo^a n gmp hgn^a | hcpk c
nwtfqnev0 Rgf ki c nwtfqm gffki ²r qn{ n^a ³/₄ p{ ³/₄ gp
xkugmgf vgm n^a to^a p{ wmen o kv c pgo | gv o q| ic/
nqo o cn u| go dgp0 D^a t c| cpi qn k^a vgnki gpeg Ugtxleg.
co gn{ c n^a jgvv^a i gv pgo kuo gt . gi { ct^a pv xcm/
o gt . gu| gu go dgtgn^a n c^a m^a u| kv² p t² u| vgu| c|
cnek> dcp< pgo ukgt^a n Mgo^a n gmp ugo o k² tf go r/
i gugvppk0

Mgo^a n gi { tg dk qucdd vclqp^a m Mku/f | ul^a dcp0
C n^a to^a p{ xku| qp v gi { tg hlxgu| vgwdd0 XK0 O qj c/

o gf pgm plpeu o »fl^a dcp nēvqpcu^a i qv hgrkqpwnēvpk
 c špgo | gkgnō gmgp < Mgo^a n gl v rqpvcup wf lc c
 o ci c nk v p ²tvgu^ā ugk t²x²p0 i { o²i vx^a dd
 o gi { gi { pci { r²r²uugr0 3; 3; u| gr vgo dgt²dgp u|²m²
 j gn²tg. Ukcudc. o quv o^at gi²u| V^{3/4}ntu^a i n²r/
 xkgn kv j²klc o gi 0 O kpf gp ngt^āvgpgm j^atqo o gi/
 d² qvcvngmm^ārf gpk < pci { t²u| vo gi kulgrppgn0

C nqto^a p { gttg Ālcdd f^{3/4}i gf grō gu. fg r rēv/ |
 plmw v²cmō cnev kv² | c i { r²uj gi 0 O kgn c rctrc/
 o gpgv pgo t²i kdgp qu| rēv²m hgn n²pp { Mgo^a n xku|
 u| cx^a i^a uc < j²klq^{3/4} u| g c nqto^a p { Ā rctrcō gpgv.
 cmqt pgo rgu| u| Ām²i c ukcuki { r²utg0

C u| w²pk nqto^a p { ô o k²gp »tk^auk j cncf^a u
 gl c uco uw²pk grh²ci cv» rctcpeu w²p# ô o gi d² qvc/
 nev m^ārf Mgo^a ij q| (0) L> kpf w²v²cp wf²v²tc cf cv
 l^am j qi { j cvmō c o²i plpeugp o gi d²p²x²c0 Vknqu
 u| gt| f²ug xcp Y kpuvq Ej wtej kngn co gn| u| gtlpv
 Cpi rlc gt kv c u| w²p tgp f gm²|² u²tg dqu²v²lc ..c
 dktqf cmqo ^{3/4}u| gvct²uc. c x²i u hgrh²tf w²u. r qri^a t/
 j^a dqt Ā² u ngtgu| v²p { Āf^{3/4} ²ugm nk^{3/4} ²u²pgm o gi/
 cncf^a n²q|^a u^a tc0

Mgo^a n c| qpdec pgo gi { gl n²gf kn0 U v o gt²u|
 n²kgvr²ugmgn r²r hgn < Hgtk² Dwuc²vc ruc c o quēvpk
 pci { xg|²t v²xq|^a u^av n²kgvrk0 Dwuc² gttg c| qppen
 hgrl^a prlc rgo qp^a u^av² u pgo ku xqplc xku| c ugo /
 o k²rg n²t²utg ugo < c| u| go² n²g pg rgi { gp cnc/
 f^a n²c c d²n²u o gi gi { gl² upgn0

XK0 O qj co gf o^a upcr Crik Tk c ruc u| gp^a vqt v
²u v² dqt p qnqv ô Mgo^a pcm² u r^a t^a pcm vknqu j²
 x²v ô pgxgl k nk pci { xg|² tpgn0 Mgo^a n o quv o^at
 d^a vcp r²r j gv hgn < n²kgvrk j qi { c nqto^a p { j²klq^{3/4}
^{3/4}u| g u| cd^a n²u| gt pgo | gi { r²uv² u gl c i { r²u
 f^{3/4}pv^{3/4} ch² v² < grh²ci cf lc / g c| qt u^a i c u²xtguk d²/
 n²hgn² vgrngv xci { ugo A J qi { o k rgu| c| qt u^a i i cn
 j c pgo h²ci cf lc gn c hgn² vgrngv. ett>n pgo gukm
 o quv u| »OF g ugp nk pgo ku n²tf k0

C nqene rucv²pn²pv vj^a v o gi h²tf wv. Mgo^a n o c/
 i c u| cdcf² u j q| |^a h²tj gvgv² j gi { gk n² ^{3/4}v. c j q| |^a

hgn² vgp² Ān tci cu| nqf » j² xgkpgm xk²| nēvqpcp²cm
²tv² ²ipk|j c²pk n²ul² v²dqt^ad»n Ā|gpi gv o quv o^at c
 ul w²p ppcn# XIO Oqj co gf r g f k i pgo v²j gv gi {gv
 r²p ul cdcf o q| f w²vq v ugo c| cpvcpveucr cvqm ul qt²»
 i { t l²dgp. c| cpi qn h²cepk. qru| v²dqtpq²nm² dgt
 hgn² Āi {grvg c²rw⁰ O quv o^at c ul w²p n²4p{g| gvg ugo
 vkn²qrlc< j c gn cnet² t²pk x²c²ro kv Mgo^a ip^an gi² ul gp
 o^a u j cpi pgo gvngmo gi Āp²kg⁰

C v²rlgu ki c| u^ai c|. j qi { c ul w²p j c v m c o^at
 eum p²x²ri gu⁰ O k²p f gp w²cmqf » j c v m c^a t p {²nj c/
 v²mqo. j c f ugtgi p²m²Ān co gn² n²ul gp^a mpc x²f gn²
 o²tg² u r c t c p e u c k c⁰ XIO Oqj co gf c| q²p d c p pgo k²p/
 f²j cv j c f ugtgi gv= c| cpvcpv r g f k i ul k²v²p h²| km
 v rg. j qi { c p²i {²xgu² 3/4f²3/4m²u w²p. Ācdd nēvqpc
 cne²dc n²gl f lgp gi { h²qtqpi » v²xq²rk qtu^ai dgn²gl²/
 dgp⁰

Mgo^a r²pcm xku| qpv x²ppcm eucr cvgugk j² xgk
 hgi {xgtg⁰ Uco uwp o quv o^at pgo o gi h²rgn ul² m²
 j gn² c n²qto^a p {^a utc⁰ Cpi q^a t^a d c n²4n²4 km^a v² u gl gn
 o gi c²rr² q²lc c| g f f k i eum h²4f t c l | k r i kuo gtv x^a/
 tqu v²4 v² p g m k l²3 l²v⁰ O k g Cpi q^a t^a d » n C p n e t c .
 o c l f C v v Ā m x^a t q u c r g u l = » t k² u k h q t f w²v q p o gi {
^a v V²4³4 m q t u l^a i 0

XIO Oqj co gf o quv Ācdd r²r²uugn r t » d^a m q | k n⁰
 O gi ul qn²q w gu| n²4 g c j c v m q o p c m š n k q i p k c ul g/
 r g v⁰ c h g m g n m x k q t n² l^a d » n c | | c n j q i { o c i^a 2 x^a v g/
 ul k c h g m g r² u l g n u l c x^a v⁰ C ul w²p e u^a u l^a t k p { k c v
 n q | c v q v c f n k c | q t u l^a i o g i t g h q t o^a n² u^a t » n = p { k v
 ul p²x c m² u v v g u l c y k u q p k g r x g n j g l x c n² j u² i² t n⁰
 G r k p f² q²lc c n²4 x² r g o² p { d g p c | v c ul^a o qu j gn² g u r² u t g
 v c n² v c n e k² v c o g n² c | g n u l g i² p { g f g w g n i {³ p i Ā v
 q t u l^a i q v C o g t k n e r t q v g m q t^a w u c c n² ul g t g v p² j g/
 n² g l p k⁰ C o g t k n e u q j c u g o x c m q w k o r g t k r i k u c g r x g/
 n g v < V²4³4 m q t u l^a i k u o g i o g p g m Ā j v y p g c h g n q u l v² u/
 w n c | G i { g u Ā v f m e o q m x² f g m g c r c w #

C y cuj kpi vqpk ul gp^a wu c| q²p d c p g n w c u² q²lc g l v
 c d k² e t t l e x c u r e v q < c | 3/4 o² p { i { k m q u C d f w n J c/
 o k² u V e r c e v o g i G p x g t q t u l^a i^a d » n p g o n² t p g m c
 H g j² t J^a | d c p 00

3; 42 lcpw²t j wu| cf kn²p 3/4 u l g Ā n c | Ā l v²4³4 m

pgo | gvi { r̄u0 Ki cm cu xkc w̄p jcv̄tq| cvdc o gi { <
 hgn ngm a rf q| pk c| qtu^ai v̄xqrkdd 2u nkgddu²i gm
 rcmc vgt̄Argvk. jqi { ¶| { o gi o gpv²m c vku/vc v̄4/
 t³m qtu^ai t²u| gngv0 C pgo | gvi { r̄u vj^av gr̄qi cf lc
 O wu| vhc Mgo^an a n̄ur qp^av= o gi u| Ārgvm c| Āi { /
 pgxg| gw špgo | gvk rcmwo õ c n̄u ddk cmq^av{
 crclc0 Mgo^an gr̄tv. co kv gffki 2u c| »vc gi { gwgp
 Dcm̄p/a mco ugo wfqw gr̄tpk ngtgu| v̄Arkvg c|
 qtu^ai n̄4 x²rgo²p{²dgp. jqi { eucm d²n̄u vgt̄Argv
 hgr̄f^auucn r̄lgv c| qtu^ai d²n̄l²v n̄p| gtx^arp0 C
 n̄u ddk 2xv̄ gf gm d^ao w̄vqcp ki c| cv cf vcm gppgm
 c r qrkkn̄ pcn0

ZXKOC u| wv²p o gpgn̄r̄ug0

O wu| vhc Mgo^arcm gmq̄t x^atcvcp 2u cnctcv
 rcp u| 3/4gv²i gug³o cf ô Cpi r̄k^adcp0

Nr̄q|f I gqti gqv. c| cpi qn o kplu| vgtgp³n̄4 o quv
 o^at wi { cpku n̄qo qn{cp n̄g| fvg ci icu| vcpk c ngo^a/
 rku³m gn tgv̄4²ug0 C| cpi qn rtgo lgt vj^av x^atcvcp/
 pwn o^at»n̄j qmper tc cpi qn n̄vqpcu^ai i cn u^an̄vc
 o gi U| vco dwn0 M̄4 dgp uqm n̄nggo gwgp kpef̄gpu ku
 gn hqtf w= gl gr̄tv c| cpi qn xgl gv²i gr̄i v̄vgn cf
 wi { cp. fg c v̄Ar̄c^auqm o²i ku pci { gr̄gpul gpxgv x^an̄
 vcpm n̄0 O ci c X̄K O qj co gf ku v̄nlgupp gi { gv²tv
 gddgp c n̄tf²udgp p²r²xgr0

C| cpi qn n̄vqpcu^ai u²vngti gvk c o^at gt ugp
 šngo crkvcõ. fg o kpf gpn̄rrgp pgo | gvk k^ap{ Ā rct/
 rco gpv̄0 C n̄r xkugn m n̄4 Ān cj^ap{ cv eucm wf pcm
 gr̄qi pem 2u O^an̄^adc xku| kn0 Uqnpem c| qpdcv ukngt̄Ān
 o gi u| 3/4n̄p̄k< gl gm gi { gpgu Āk^ap{ dcp ukvpgm Mku/
 f| uk^adc. Kugo^aij q| 0 Xqncm̄rgp c| v̄4v²pv vj^av
 jqi { pgo Mgo^an jq| cvc jc| c c n̄qto^ap|. jcpgo
 c rctwco gpvgn̄r̄f v̄g w^apc00

C Mgo^amcn tqn̄pū| gpxg| n̄qto^ap|. 2if̄p c
 o quvcpk pci { xgl²ttgn gi { U| cikj pgx rcu^axen ô
 gi {²dn̄pv Mgo^an u| go²n̄{gu l> dca^av^axen ô ngo qpf0
 C ugkn̄Ān̄k̄n̄o gttg n̄k̄4 3/4f̄k Mgo^an. o gtv. o kpv
 o qpf lc Mgo^an e²r̄ck šc xcn̄uucn 2u c| gtn̄4eugn gr̄

ngpng| pgnõ0 XKO O qj co gf r g f k i c | qppcn xkuu| c j ¶klc
 pci { xgl² tpgm Hgtkfn Dwucvk r ctu^a v0 O wu| vhc Mgo^a n
 rgtu| g pgo uqm i qpf qv euk^a n o ci^a pcm cdd» n j qi {
 U| wo dwidcp gi { ¾gi Æ gi { j^a | k^a wqv o qpf qw nk0
 Gnqxrv gttg nř u| Æxgo^a t t² i 0

C v³/₄¾m o qpctej k o wu x² f k o quv c | cpi qnm
 ngu| pgn0 C ugkm/ Æ/ k n^o r g f k i šk n^o j c f ugt gi gv^o vq/
 dqtq| Mgo^a n gmgp0 Mß4 dgp o gi v³/₄v² pkm c v³/₄¾m d²/
 ngu| gt| f² u x² i n gi gu o gi u| ¾xgi gl² ug. co gn| gmgp
 j k² dc go grk hgn vknctq| » u| cx^a v XKO O qj co gf nqt/
 o^a p { c0 C i { | vugm n³/₄ v³ m o² i c n gi { | ¾xgm k^a p v
 cpp { ktc go dgtu² i gu Okngtcpf ku. c | | cn kpf qnq^a n c
 u| gt| f² u u| ki qt Æ^a i^a v c n³/₄grgu² i Æm c j c n^o itc Æ/
 f³/₄¾w ngtgu| v² p { nkugdu² i gv v^o qi cvpksm gu| c/
 ncf^a uk v³/₄ gnx² ugldgp0

C u² xtgu ku| gt| f² uv vj^a vcn^o ¶l^a n0

U| wo dwidcp o gi kv Æ nqt o^a p { c r c m v n ô c
 v Æ n u t nqt o^a p { x^a nq |^a u o kpf ki tquu| lgn c | qtu^a i
 dgu nqu| qnk^a ek^o l^a tc p² | xg0 C p { q r e x c p² xgu Æ
 nqt o^a p { g p³/₄ m Æ gp c | Æ f³/₄¾w grhqi cv^o uk rctcpeu
 c r c w^a m» Mgo^a n p c m k l³/₄ l³/₄ p j^a v x² i t g j c | c² u xg/
 i { gp t² u v c nqputwm^o k o w p n^o dcp0 C d² n^o v c n^o ¶/
 v³ m f g c | c p v c p j c v c m q o c r c w^a m c | gi² u| qtu^a i <
 u| Æ m² i x c p g t² n^o gu n^o | t g. h c v c n² u j c v^o t q | q w c n c /
 t e t c 0

C Mgo^a n gmgp ncf qw grhqi cv» rctcpeuqv o quv
 o^a t xkuu| cxqp^a n0 K | gv² u U| crkj r cu^a m Mgo^a n n^o v
 d c t^a v l c ku m Æ h³/₄ f³/₄ p v^o t i { c r 0 Mgo^a n d g r g n e r e u q n » /
 f k m c f k n q o^a e k^a d c 0 P g x² v P { v i c v q p ku grkuo g t² u g n
 n g | f k m g o n g i g v 0

Cpi nk o gi f³/₄ d g p x g n^o v l c. j qi { c u | w n^o p o² i
 ¶ | { . cpi qn ugi ¶ u² i i gn ku vj g v g v g p 0 O^a u dcl ku x c p <
 n^o u | c u² x t g u k d² n g. f g p k p e u c n k x² i t g j c l v u c 0 O c /
 i w m n³/₄¾w c | c p v c p j c v c m c m n³/₄¾w ku gi { g p g v g p /
 u² i v^o c f 0 H t c p e k c t u |^a i l² n² n g p { n g f k m j qi {
 Cpi n² p c m l w q v c m V³/₄¾ n q t u |^a i j c l f c p k n g i² t v² n g /
 u g d d d k v q n c k < c o q u u | w k r g t » r g w o h q t t^a u q m² u R c /
 n g u | v p c 0 Cpi nk v k g p p² i { o k r k » Æ c r c w x c n j q | l w
 v q w. H t c p e k c t u |^a i j^a t q o o k r k » Æ c r c w x c n l^a x c n
 u | g o d g p. n g | f k m h g u | g p i g y p k c h t c p e k n e r q n 0

J {vj²dgp. i^{3/4}3/4 l^{3/4}f^{3/4}p vci¹m¹u| km o quv c n²v
 p{wi c¹k xg|²th²t¹k¹ N¹u|f I gqti g²u O kngtcpf 0
 Gi {dgp o gi gi {g| km c x²rgo²p{¹Å¹ pgo cnetpcm nē/
 vqpcu¹i qv m¹Å¹f gpk c u²xtguk d²ng x²i tgj cl¹u¹tc<
 g¹i xq¹vc x²tq¹p¹ud»n

X^atcvcp n¹xg| gv Å¹v ng¹ c vcp^aeun¹u|^au g¹hgf/
 o gp{g< I^{3/4}3/4 qt¹u|^ai x^an¹m¹u|/km c u²xtguk d²ng x²i/
 tgj cl¹u¹tc0 C r¹kj gpv. j^adqtÅ¹v pgo x¹kug¹v I^{3/4}3/4 qt/
 u|^ai x^am¹rc c u|gtgrgv< Xgp¹k¹gr¹u| o gi gi {g| gw c
 pci {j c¹cm c¹m¹en c i^{3/4}3/4 j cfugtgi n¹u| gp^am c
 V^{3/4}3/4m¹tu|^ai dc xc¹» dgxqp¹w¹utc0

G| crw o^at³u| g¹Å¹v Cpnet^adcp c šPci { Pgo /
 |g¹i { n¹u¹0 Vci lck< Mgo^an t²i k j¹k¹gk²u c U|co /
 dÅ¹d»n qfco gpgm¹Å¹v n¹r x¹kug¹n n0 C pgo |g¹i { n¹u| nk/
 o p¹flc. j qi {< šX¹K¹O qj co gf c| cpi q¹m¹ tclw¹Å¹u/
 u|gt dgxqp¹w¹u¹»n ng¹f xg c| cpi q¹m¹ ng¹2dgp r¹x
 h¹qi q¹n¹pc¹m v¹u| p¹cm v¹g¹kp¹vg¹p¹ 2u q¹ { c| tgp¹f g¹m¹g/
 |²ugk¹pgo o²t¹v¹ncf»m¹3/4d²0

Mgo^an n¹3/4dgp v¹ti {cn c| qtqu| h¹ttcfcm¹o xg/
 |²t¹gk¹xgn ku²u v¹3/4d v¹g¹kp¹vg¹dgp o gi gi {g|²u l³p r¹v¹g0
 Mgo^an gtt n c| q¹fcrt»n v¹g^av u|cdf ng¹gv p{gtv0
 G|w¹p Å¹d»n c| Cp¹cw¹rc n¹g¹vk j cv¹t^ap c¹m¹w¹v 3/4/
 o²p{ j cfugtgi g¹ng¹ h¹tfwn²u rg ku xgk ngv< c d²/
 ng¹u|gt| f²udgp o k¹f³4u|g g|gt³4u|^a h p{k j cfugt¹g/
 i gv g¹pi gf²n¹g| p¹gnk¹0 C| c¹gzc¹pf¹tq¹r q¹ku|k d²ng x²/
 i gv xgv c x²to gu 3/4o²p{ tgo²p{u¹i g¹ng¹gk< Cto²/
 plc h¹g¹o¹ cf^au¹pc^am^a c c o Å¹n²0

P²i { p¹errcn g|w¹p c n¹qo o v¹pk¹vc eucrcv¹qm dg/
 xqp¹w¹pc¹mGt|gtwo dc0

C i^{3/4}3/4 3/4m r¹gfki pgo x^atpcm co q¹ V^{3/4}3/4m¹tu|^ai
 tgp¹fdgu|gf k ugtgi²v0 O^at p{^atq¹ g¹kp¹w¹pc¹m Dcrk¹ng/
 u|kt h¹gn n g¹ftkm c O^atx^ap{/v¹pi g¹tv g¹h¹qi n¹rc^am
 Rcp¹fgto^av²u Dtwu¹u^av. c| uk n¹u¹tp^a»x^atquv. O w/
 f^apk¹v²u K|uk¹gv0 C o^au¹fk¹m i^{3/4}3/4 j cfugtgi. cpi qn
²u i^{3/4}3/4 h¹q¹wc¹o qi cv¹u¹en Tq¹quw¹»n F¹tk^ar q¹ki
 h¹qi n¹gn o k¹f¹gpv. c jcto cfkm U|ok^ad»n k¹f¹wn nk
²uo gi u|^amo k¹f¹gp Å¹dc gu v¹3/43/4m¹ctv¹o^ap{v0

O k¹g c| u|dg^am<gi²u| V^{3/4}3/4m¹tu|^ai i^{3/4}3/4 n¹/
 |gp xcp0 Eucm eu¹fc o gp¹v¹gk o gi 0 | u c šeu¹fcō

o gi ku v^{3/4}v²pkⁿ⁰ Mgo^an o gi^anⁿlc c o clf pgo xgt/
j gvgvⁿp^Ängn tgp{qo wⁿ i^{3/4}3/4 j cf ugtgi gv⁰

C uqtu ku ngl²tg l^avu| km o kpv o kpf gpnqt. gi²u|
²rgv²dgp⁰ C| cpwcpv vⁿrlgu gtgl²xgn v³o qi cvlc c i^{3/4}
t^{3/4}3/4ngv⁰ C pci { ukngtgngp hⁿrdw| f wv o qpctej kuc
r^atv c| qpdcp rweucn xku| cj q| | c Mqpuwcpvk nk^an^v
Xkⁿo qu gzeu^au^at p x²t²pgm h²t²v. cnk pgo ngf xgu
go dgtg c| cpwcpvpcn⁰ C jcvⁿo cu ugi²u²i c fg/
o qmⁿcv I^{3/4}3/4 qtu^ai pcm u| »n. pgo c o qpctej kuc
I^{3/4}3/4 qtu^ai pcn⁰

C hⁿcp^ek uclⁿ» ô m^Än^{3/4}p^{3/4}ugp c šNg Vgo ru^o ô
vⁿrg xcp i^{3/4}3/4 gmgp^u ekmgmⁿgⁿ C| cpwcpv ô h/
n²rⁿgp hⁿcp^ek p{qo^aut^c ô vⁿknⁿu| km c tguⁿwt^aekⁿ
gmgp. o clf p²j^ap{ j²v o Äⁿkc dgu| Äⁿpvⁿk c i^{3/4}3/4
j cf ugtgi v³o qi cv³u³ v⁰

Mqpuwcpvk dⁿ km j cf ugtgi²dgp²u hⁿqⁿvc^{lc} c|
gn p{qo wⁿu⁰ Mgo^an c| qpdcp ô euq^arcv^u vⁿgⁿgv
u²i j cf xg|²t²u fⁿkrⁿo cvc gi {dgp. ô Gunk Ugⁿ k^t
o gmgwo gi^anⁿlc c i^{3/4}3/4 eucⁿcvⁿu⁰

C j cf ugtgi gmgⁿttc o^at Äⁿtc šo qpctej kuc^o ²u
šxgp^kgrⁿuc^o v³dq^{ttc} u| cnⁿf v= gn {gpi Äⁿug²tg|
j gv⁰ C v^{3/4}3/4n^{3/4}m vⁿg^av. cnkngv o quv o^at gi {gvgp j c/
vⁿo cu gt ngmgⁿuⁿ. Äⁿtc d^avⁿtu^ai tc ner pcn= m^Än^{3/4}
p^{3/4}ugp co knqt n²v^am j qi { Mgo^an o gi^anⁿq^{vc} c hⁿ
vⁿuⁿ»| vⁿy cvⁿcvⁿppcmⁿ u| » qhⁿgp| ⁿx^a v⁰

K^p .. p^Ä p^gx j gn²u²i o gmgw hⁿqⁿkm ng c| gn
pci { eucⁿo K^p .. p^Ä šDctⁿpi U^al^av^o lgrgp^v gtt n
xgwⁿ hⁿ c eucⁿfⁿk p^gxgm n^{3/4}grⁿ| hⁿrx²vⁿrgnqt n²/
u dd p^gx²v^ko gvr cuc. Mgo^ancmⁿqtⁿki gpg^anuc⁰

C pci { Äⁿn^{3/4}gv ô co gn² w²p x^{3/4}3/4ugm ngwgm
c x²tv n c Ucnⁿtk^{lc}/hⁿqⁿ» j wⁿo ck ô Mgo^an ugtgi²/
pgm h²p{gu i { |gm²xgn x²i | f^{3/4}v⁰ C| gi²u| v^{3/4}3/4n²
u²i. ô ko^at r^atv^c xcn» vⁿkp^gv p²m^Än ô wllq^p/
i qw²u o ci cu| vⁿc c i { |vⁿu⁰ C p{qⁿrcp²xgu Vgx/
hⁿkm r^uc. V^{3/4}3/4n²tu^ai i tgev qⁿf o cplg. hⁿevn u| ⁿx/
xgn xgw t²u| v c| Ä²ngvtg²dtgf v j c| c^{3/4}3/4 Äppgr²/
dgp²u p^kpeu o^au²t²ug g| gp c pcr qp. o kpv c j c^alc
hⁿu| cdf ⁿlc k^apv^xcn» o²n²u²i gu grⁿo gt²u⁰

Gn flg. Hⁿtkf D^ucvⁿ r^uc g| crw Ecr f^oCkⁿdp
²n³pn²pv^u u^ao | g²udgp⁰ Gn^wc| qw³pn²pv U| w^o /

dwd»rŋ O^at ku hgrfvc u»iqt^av X0 Oqj co gf gv²u
c v̇4³m o qpctej k̄o wuŋ0 3;46/dgp hglg|k dg c ul^ao/
n̄kxgvwgm ulqo qtÀ²ngv²ŋ Pgo uqn̄tc n̄kxgvk w^av
jgwxgp²xgu j u²i gu hgru²i g. X10 Oqj co gf p x²tg
ku0

Nqpfqpdcp o quv x²itg 3/4u|gĀn c ngrgvk n̄p̄hg/
tgpck. co gn(gp o kpf n̄v v̇4³m n̄qto^ap{ n̄r xkugn/
vgk o ci^av< c ul vco dwk ku²u c| cpi qtek ku# Kw fg/
tĀn nk jqi { c n̄v n̄qto^ap{^an̄ur qpvc n̄k³4w p̄k̄eu
gn²t²u< g| c n̄k³4u j c| ch̄cu²t|²u v̄to²u| gvgu 3/4u|/
j cpi¹a p n̄kĀn Dgn̄t U^ok dglpgm Mgo^an n̄r xkugn/
l²pgm fkr̄mo^aekck dtcxĀtlc0 C ngo crku^on̄v o²i
gi { fkr̄mo^aekck gr̄kuo gt²u²tk< Uhqt|c it>h c| cm/
n̄qtk qrcu| mĀnĀi { o k̄p̄ku| v̄t ô gnu p̄gm c| gwt>rck^an̄
rco qm n̄kĀn ô o gi j k̄lc c Mgo^an n̄qto^ap{v rqrk̄/
n̄ek v̄ti { cñ uqntc Qrcu| qtu^ai dc= g| gn n̄r euqr̄v
dcp eu³pf dgp xku| cxqpl^am c j^adqtĀ dghglg²ug >>c
v̇4³m̄h̄f̄f̄³p^am> eucr cvckn̄v0

C i³4³4 j cfugtgi o²i o k̄p̄ki V³4³4 n̄tu^ai dcp
a^m fg o^at pgo uqn̄ki 0 Ng| clrk̄m c o^auqf km k̄p³4Ān
eucv ku< c v̇4³n̄k̄m f³4v²u l̄p{gu i { | gm̄ gv ctcv
pcmc| gm̄pu²i l̄h̄f̄h̄0

O²i 3/4 x²tgu per ô²u Mgo^an c v̄gpi gr̄ctvc
ul qt̄qvc c o gi xgtv. tgpf Āngv̄pĀn xku| c³4³4n̄ i³4
t³4 ugtgi o gi o ctfv tqpeuck0 C H̄f̄f̄ n̄k³4 k̄v̄gpi gt²u
c O^atx^ap{v̄gpi gt g|gtu^ao tc j³4 r³4{³4 v̄gk c j w/
n̄n̄v c rctv h̄r̄0 Oci w̄m c rctv̄m v̄ng xcppcm c
ul²xgtv j cfugtgi n̄vqp^ak̄cm x²tgu v̄vgo gkxgn gn/
r wul w̄w̄qxcmen ul gm̄tgmm̄gh̄i { xgtgm̄gr̄0

O wul v̄hc Mgo^an rcuc pgx²v n̄ xku| j cpi | km c|
qtu^ai 0 C o w^apkck d²ngn̄k̄²uv. o^at gi { gf Ān k̄lc
cñ. o kw^op n̄k³4 dgp t^atwj^a|v c pgo | gvi { n̄u c v̄n/
lgu j cf xgl²tkj cv̄m cv0

V³4³4 n̄tu^ai dcp c| qpdc p o²i o k̄p̄ki n̄v n̄q/
o^ap{ xcp²u c| cp̄cpv eum c ul vco dwk n̄qto^ap{v
kuo gtk gn< c| v j k̄lc o gi c| cpp{ku| qt gr̄pcr q̄v²u
o quvkuo²v̄h̄r̄xgwd²ngv^oti { cñ uqntc0

Mgo^an gttg o gi k̄p̄k̄lc c x²iu j cteqv c t²ik
tgpful gt gm̄p0 .. wul gi k̄lc c| cpi qtek Pci { Pgo/
| gvi { n̄u0 C pgo | gvi { n̄u j cv̄tq| cv̄v j q|. co gn/
/

pgm ²tygm ²dgp c u|wco dwk nūto ^ap{ < ^v/₄x²p{gp nŋ/
xĀn^anŋŋ

C u|wŋ³p c Fqm c/Dci eug rcmqc cpp{k fleu /
u²i gv ²u cpp{k d pv n¹vq w vto gld n ô nksnkpov cd/
ren¹p ^av c nkxk¹i ŋq. ³/₄³/₄ o ^ao qtdep À| » h x^a/
tqudc0 Gi {gvrgp p²xv n xku|j cpi| cpcm c| wllqpi »
we^akm gi {gvrgp pgxgv rgpi gvp²gm c |^au| n>m gi {gvrgp
go dgtpgm c n¹r²v vgw²m nk dcd²tten ³/₄gl gwrgp c|
Ā rgvm ²lu|cnc ku xkncp{l²p{dgp hĀf nktcncvck/
dcp0 Mgo ^an pgxg. Mgo ^an n¹rg. Mgo ^an fleu u²i g o kp/
f gpĀw0

ŋŋ C Fqm c/Dci eug rcmqc gi {km u³/₄²v cdrc/
n¹dcp j cmqj^avĀ o ci cu. eu³/pf gu l²thk ^am ²u gri qp/
fqm| xc p²| o ci c gr⁰ U³/₄²v gm nqo qtem c i qpf qrc/
vck0 Vc¹p xcnc k gm wcu|vqtc. xcnc k l>x^avppk/
xcnc²e i qpf qm=cn¹p c ucl^av gi {²pkl³/₄ l²tg0

ŠJ c u|cn¹mco pcm gi { u^arc wfpc ctt>n co kv
u|ŋgo dgp i qpf qm gm nk²r p²o ²u c v|dgxgp²o ō
ô o qpf v gi {km j ŋgu u|wŋ³p/ ug0 XJO Oqj co gf wf
jcmi cvpk ô cmqt ku wfq. co kmqt o²i pgo xqm
t^a cmqt u|Ām²i . o kpvo qu0

C| cpmetck pgo|gvi { n²u rgfki nkrgp²vk jqi {
c| cpcpwcn elo dqt^an» XJO Oqj co gf gv j c|c^atw^au
o kwdŋ>u^ai gr¹ hji lc ^anŋcpk#

O leuqf c x^anq|^auqmc| wqn> gu|vgr¹ dgp#

C ^v/₄x²p{ c|qpdep eucm c šu|wŋ³p u|go ²n²t n
dgu²n o ci^av c u|wŋ³pk jcvco cv gi {gn tg pgo
²tkp0 C nerk¹wu ku nkgl gwrgp o gijci {lc. o clf
Ā { kp²|ngf km jqi { šc| qtu^aii { n²u c nerk¹wut
c| Q|o^ap/j^a| ngi vj gw²i gugdd ²u ngi²tf go gugdd
vi¹vhji lc o gi x^arcu|vcpk0

Cpmetc rctepu^atc Tlkcev rcuc xgu|k ^av o quv
U|wco dwn rqi^atk n¹4 ki c|icv^au^av0 C n¹4xgng| pc/
rqndcp XJO Oqj co gf ^anepf>cp nūphgtgpek| km rc/
tcepuqnev qu|v vcp^aeuqnev n¹t. j ŋxngv x^at0 J c c
nūpucp^arpqk jgn tu²i gv j u²itg nji gvg dŋpk<
cn¹p o²i o gpj gv rgppg gi { fctcdki c jgn|gv0
Gttg c|qpdep ugo o k tgo ²p{ ukpeugp0 C ncvp^am c

j cf xgl²t/gul^o 2p{nfr. Mgo^an o gnr^a mpcn0 Qf^aki
 2tkm c jgn{ | gv jqi { 3; 42 pqxgo dgt 8/a p Mgo^an j kxgk
 c ul wn^apk rcmqc gr^a xqpwpcm²u qw tgpfgl pgm rgn/
 ngu tqnqpu gpx/v^apv²uv co gmw c j cf xgl²t²u^an/
 rco l²thkÀ o gmw. cnkpgm tgpfgmgl²u²d n c rcmqc/
 dgrik ul wn^apv ô j c | c^atw>pcm p{kx^ap^aq^an0 C
 ul wn^apk rcmqc tu²i²u tgpfgl tu²i pci {pgj gl gp ul²v
 qu l r^alc wi {cp c v³o gi gv. c ul wn^ap c | qpdep o^at
 uglj gk o k x^at t^a. j c gl c j cpi w^av o²i lqddcp gn/
 j cvm cuqf km n²4^a3⁴wg0 Gi²ul qtu^ai^adcp pl^aeu o c
^atx^add. grj ci {cvqcedd go dgt. o kv gl c l²p{gu rc/
 m^av^la dcp rj qti cul vqwh xgn^a3⁴2ⁿ wcmqf»0

O^aupcr c | v^ap eucmwi {cp gi {gf^an o ctfv rc/
 m^av^la dcp XKO Oqj co gf0 C ul wn^api^atf c dglgrppk
 j qi { nk^ar c ul qn^arvd»n²u^awo gi { Mgo^an v^adqt^a/
 dc0 C Fqm c/Dci eu²dgp o kpf³uul g p²j^ap{ go dgt
 o ctf c | wcmqf» nku|qn^an^au^atc²u ô x²f gm²tg0
 Pgo euqfc. j c c rcf kucj o gpgm^a3⁴utg i qpf qn0 Pgo
 ô pgo ul³nm o kv c Mgo k²0 Gi {gn tg o²i o gi/
 xgk gl v c o gi qf^au0 P {ncp cnet gnwclpk0 Co k
 nqt c | qpdep nk^aqeu k km c x^atqudc²u c r^anqu^ai o c/
 i cvt^av^au^a r^alc < gl c o gi qf^au gi {tg ngx²ud² n^av
 ul kmnklj gv pgn0

O kpf gpnk wflc. j qi { c ul wn^appcm o^at eucm
 »t^akxcppcmj^atc c | grj cv^atq|^autc0

U grko j gtegi. KO Cdf wn J co kf pcm c | wf xctp^an
²n. ki gp vj gu²i gu hlc. o kpf gp gul n²4 | gn t^a cnetlc
 d^aipk c ul wn^apv. j qi { o gpgm^a3⁴p ô cni j cpgo c | v
 i qpf qrlc. j qi { c | Q| o^ap/j^a | pcm c | c dk qp{qu rgi/
 vj gu²i gugdd²u rgi²tf go gugdd vclc. cnkv c Mg/
 o^an^aqto^ap{ c n^akl^awutc o²n>pcm hqi vt^aepk
 eucm rj gv0

C ul wn^ap x²i tg j cv^atq|0 Grj cv^atq|^au^adcp uqm
 o gi ngr o²n>u^ai²u³phgr^arf q|^au xcp0 ô C | Q|/
 o^ap/j^a | j ci {qo^ap{ck ngm rgtedgp o²i xcno gp{/
 p{k ul wn^ap vcl^adcp hgr²dtgf vgn0 C x^atqudcp uqm
 j k xcp o²i = rqi^atj^adqtÀc ngt^aj vpg c uqt ul g/
 o²n{g o kv0 Mk²t c | Àd>»r0 Kgp^agv n^a3⁴ J cttkpi/
 vq cpi qn v^adqtpqmpcm²rv²v pgo²t|k o^at U wo /

dwrdcp dkl vqpu^a i dcp. gl²tv nřp{vgrgp o ci^av cpi qn
x²fgrgo cr^a j gn{gl pl⁰

Pqxgo dgt vl gpj gvff knřp. nqt c tgi i gn euwnq w
cw»m^a nřcm o gi c [kř k / r crqveuqr qtv gi {km grf w /
i qw j^aw» nk^atcv gn w⁰ C| gu nřeukdcp Ukt
Ej ctrgu J cttkpi vqp v^adqtpqm h rctcpeupqm Ān c|
cpi qn nř^agw²i f tci qo^a pl^apcm nř²tg^vdgp⁰ P²j^ap{
r gte o Āxc o gi lgrgplm XIO O qj co gf ul wv^ap. rgi kf /
ugdd h^axcr Gtqi tcn j gtegi i gr⁰ Gi {gptwj^av xkugr /
pgm o křf c nřwgp⁰ C| tu²i p²j^ap{ j vci lc p² /
o^ap vku vgrgi² u c nřeukm eugpf dgp. hgnv p²u p²n /
mĀngkřpf wpcn⁰

Mřv o^aukm cw» ku i³/4f Ān p{qo wrdcp< c ul wř /
v^ap v³/4| unř^apcm j cv ul^an o gi o c tcf v vku vlg Ān
dgppĀn⁰

Cu| Ctcp{ul ctx hgrř xku| c| Ālwn⁰ Ugpnk ugo
hřtf wn o gi c t³/křf cw»uqt w^ap= c h x^atqu p²r g
pgo ku uglvk nkmĀrgmc rghĀi i³/p{³/4v nřeukrdcp⁰

C v³/4³m cfo kcrk^a ucn ul go dgp cpi qn j cf kj c /
l>m j qti qp{q| pcn⁰ C| cw»m c o »nřj q| nřp{ctqf /
pcn⁰ XIO O qj co gf c rgi pci {qdd cpi qn r^ape²nřuj c /
l>tc. c ..O cr{cō/te ul^am⁰ C hř²ř gvgp f^aul tu²i = c|
vppqr per k gi {gptwj^adc³/4v³/4v o cvt>| qm²u vku vgm
²řp Dtqqng cngpi gtpci {²u c hkvcn Ukt P gxlrg
J gpf gtuqp. c| cpi qn h o gi d^aul qw hqi cf lc c o gpg /
mĀn r cf kuj qv⁰

J gpf gtuqp ô wi {cpc|. cnk qtu^ai^av nřu dd
wqd^atc nřrxlugrk o clf Dgtrkpdgp c o^auqf km xkři /
j^adqt Ā nk³/4²ug gn w ô c| cpi qn nk^anř pgx²dgp Āf /
x³/4rk c ul wv^ap⁰ XIO O qj co gf p²j^ap{ t³/křf ul »xcn
x^arcu| qn⁰ J cpi uĀn{q| | c. j qi { ul » ukpeu rgo qpf^a /
t>n fg j^anřucp nř³/4ul³/pk²u dkl crqo o cn hqi cf lc c|
cpi qn nk^anř kf gki rpgu. nřxi kcu qncm^av⁰

C j cl> r gřki r^at »tc o Āxc p²j^ap{ nřugdd ek /
nřn» nř²tg^vdgp. gkřpf wv O^anc ul ki g^vpgm k^ap{^a /
dcp⁰

J cttkpi vqp o^at gn dd rgu^amv c j cl>t>n⁰ C ul wř /
v^ap o gi křf^aul ul excmnen dĀeuĀ qw v rg< rgnřtg nř³/4
v³/4g. j qi { xki {^a|| qp hrgu²i²tg²u r^ap{^atc. pc /

rqpwn²pv²tv²g²ug ft»vp²m²Ark v²x²»p. j qi { gi²u²u²/
i gugn/g pgo²tv²/g ngvugo o kdclA

③ X0 O w^af. KO Cdf wn J co kf²u X0 O qj co gf
u²wn²pqm ngi h²c²w²redd h²x²tg. gi { fctcdki o²i c
h²g²f²ij gvgp^an0 Xkuu|cp²| x^atq^atc. c r²u²ucp gn²p Fqn/
o c/Dci eugtc. c Eukci^aptc. c Hg²pl²tg. c r²cm²v²m²/
tc. c| Glwd/o qu²tc²u c v²Ad²ntg0 C| w²p. co knqt
o^at eucm c| u²dgdqtwn² o g| m n²x²g²ng|pgm
j gn²gn²pv gi {/gi { vtqpp{cn xci { p²j^ap{ rktqu
h²gn j^a||cn o gi u²cn²x²c< c o gpgm² rcfk²cj
o gi h²qt²wn²u u²» p²m²rn² ngo gi { c jcl» d²gn²l²dg0 C
n²ng²rk h²p{ |²u²gn dgtg²pf g| gw h²gl²g²rn²k n²cl²Ad²g0 C|
cl»p v²rn² r²gt²q²nef c f²k^ap{tc²u n²g²ugt²x²g²gn²ng²f
u²pl0

ZKZOC n²rk0

Mgo^an r²piqzck n²to^ap{c h²g²j^adqtq^au²cn h²/
i cfvc c|v c j²v. j qi { c u²wn²p gn²ci {vc c| qtu^a/
i qv0 C pgo|g²i { r²u o quv v²4x²p{dgp o qpflc nk
j qi { X0 O qj co gf gn^au²qvc u²wn²pk o²n²u^ai^av
ô pgo v²cm²qf» v²4d²0

O quv²g^av²n²rk²x^arcu²v²ut²c n²g²rn²c uqt0

Cdf wn O gf|ukf Q|o^ap/jgtegi x²rn²cj²f. X0
O qj co gf pgo t²i o²i c V³4³4m Dk²qfcm²o v²»p³4³4
n²4ug. pgo ki gp j wp{vc r²g²l²u²cn²c u²go²v p²qxgo /
dgt v²gpj cvqfkn²wn v²gn²kn²g²pegfkn²ki 0 G| c j^atqo
per xq²rn²cn²p c r²gi|u²h²q²ncdd. g²ffki g²ri²i² gi {jcp/
i²À²rg²v²dgp0 C|³4x²gp²x n²4Ark n²mu²go . u²cn²n²
rcu. o qf gtp²u²l^at^au^a jgtegi gi { t²i gp o gi i {kn²q²rn²
u²wn²ppcm i {gto g²ng²xq²rn²u²g²ffki pgo pci { u²g/
tgr gv l^au²q²w c v²4³4m r²q²rk²kn²dcp0 Hguvi g²pk u²gtg/
vgw²u o w²uk²rn²pk= h²a²v m²rn²4f²3p p²gx²ng²wg²u²jc
v²4²v²pgv²g²ppgo c r²gi kf ugdd Q|o^ap jgtegi gd/
dgp c| kf dgp dk²qp{^atc pgo ku v²rn²mu²|wpm x²ng²c
v²4³4m²v²4²pg²go dgp0

C n²rk²x^arcu²v²u^at»n u²»n² j²i c v²»pv l²gnp/
vgw Cdf wn O gf|ukf jgtegi u^ao^atc0

Cdf wn O gf|ukf u²vc o dwk r²cm²v²l^adcp o quv gi {/

o^a upcm cfl^a m c nklpeugv^a r^a vqi cv^a n0 O kplu vgtgm
 nr^a rxlugn m pci {n^a xgvgn0 K i cvqw² u hwnqu» xcr/
 o gpp{k0 Gi { cpi qn xgl² tnetk gl tgf gu ku lgrgpvngl kn0
 C o kpf ki p{wi qf v J cttkpi vqp cpi qn pci {n^a xgv
 m^a r^a vgo J f^a gngv j q| qw hgu² i² pgm pci {d^a v{l^a t»n
 cnk o kw dk qp{qucp ci i»f kn0 C| gro gpgm^a v u| w/
 v^a p l»n² t| k o ci^a v< p{wi qf v xk gngp j cl»| km c šO c/
 r{cō cpi qn j cf kj cl»p. Ne Xcrgwc nkn^a lg hgr^a 0 Qp/
 pcp r gf ki O gmi^a dc n^a u| Ān | ct^a pf qm^a t c0 —lc c|
 ct^a dkck ukxcvi qp xku| ngtgu| v^a n= O gmi^a dcp r gf ki c
 o gmeck nk^a n^a. K J wuu| gkp x² f gro g c^a hqi j gn| gl/
 ngt pl0

C| gl tgf gu c| v ku j q| |^a vgw. j qi { c| wcmqf»
 j kxgu² v o^a t xqrv u| gtgpeu² lg c| ct^a p{mi ngt xgl
 j f^a gnt n² t vgu^a vgp k0 C hgn² i gu² f gup{c gl»v o^a t
 dk qp{qucp o gi p{wi vwc n^a p{^a v. Cdf wn O gf| ukf
 hgu² i g o gp{² v ku Cdf wn O gf| ukf j gtegi hlc wi {cp/
 ku pgo t² i hrgu² i Ān xgwg XK O qj co gf gi {km r^a /
 p{^a v0

00 J cttkpi vqp pgo cfqw. ugo j quu| cf cm cu.
 ugo j cpi| cvqu x^a ru| v c j cl» hgr² n^a g² p c u| wn^a p
 t³ xkf. tgo gi j cpi qp gro qpf qw n^a tgm² tg0 Fg co k/
 tg c| cpi qn gi {u| gt c| v o qpf lc. j qi { ški gpō ô c| v
 pgo u| qmc gtrngl vgp k0

C dgu|² n^a g² uv hqn{ vppqu vku| vgrgwrlgu nqr qi v/
 v^a u | cxtlc o gi < Cpi qt^a d»n² tng| pgm gi {o^a uw^a p
 c u^a i³ p{³ n0 C| cpi qtk o kplu vgtcp^a eu »xcvqu
 hqt o^a dcp² t vgu^a k c v»p³ 4³ n^a 4v m^a r^a p d³ 4 gugo² /
 p{gmt n² u j cv^a tq| cvqnt»n0 C rgi hppvquedd< c o k/
 plu| vgtcp^a eu vrlj cvcrqo o cn twj^a | v hgn c v»p³ 4³ 4
 n^a 4v² u Āp cm kpf f^a qwc j q| |^a Tghgr cu^a v0

Tghgr rcuc vguw² tg c j cuqpn» pgx Tkcev rc/
 u^a pcm Mquvcp^a r qn{ j gn{ vct»l^a pcm Mgo^a n gi {km
 l> dct^a v^a pcm² u dw| i » j f^a x² pgn0 C j gn{ vct» xqrv c| .
 cnk c u| wn^a p v^a xq|^a uc w^a p rgr geu² vngwg c [kf k v
² u^a vgwgc u| vco dwrkn^a ki c| i cv^a u xgl g² u² v0

O c² tng| km ku Tghgr0 P kpeu hqt tcf cm^a t/o qf q/
 tc< t² i k wf xctk go dgt0 Cdf wn O gf| ukf u| go² n{ gup
 kuo gtk< c| qppcn h^a r t gxpwp cm vcp^a eunq|^a etc. gi {
 eu³ pf gu dgu u| qd^a dc0

Mgh²v rcuc qn[cp n²u] gp j q| v c| cpi qtek nqt/
 o^ap{ cl^aprcckv. o kpy c c nerkc/t»p o^at j »per qm
 »v Āgugp^ancpc0 G| c vgor» u| qncvcp²u gn²v c
 v³/4³m lgn²o²v n ô vci^ap²rrgp g|²tv m²v²uc o quv
 c ukngtpgn0 C nqto^ap{ lcxcurc vj^av g| < Cdf wn
 O gf| ukf xgi {g^av šHgn²i ð e²o gn K0 Cdf wn O gf/
 | ukf p²xgp c nerkc vt»pw^av0 P²xeugt²tg. o kpv n²v
 gn fl²p²n plpeu u| Ām²i < Cdf wn O gf| ukf pgx u| w/
 v³p Āv c vt»ppq. j q| |^a pgo ku fleu u²i p²m²Ān xk/
 ugn²g g| v c pgxgv< c tgh²to^avt K0 Cdf wn O gf| ukf
 o kpf ki dĀu| n²u²i g o ctc c v³/4³m v³/4²v²pgro pgn0

C v³/ddk vggpf o quv o^at c pgo | gv { i²u i qpf lc0
 G| gj cv³tq| v. j qi { c nqto^ap{ v³o qi cvc Cdf wn
 O gf| ukf gv. j c p{ kcvnq| cvdcp dk vq²lc< pgo^a m kf g/
 i gp x²fgrgo crw²u pgo ku hqi kf gi gp x²fgrgo cī
 j gn| g| n²gf pk< ô hqvqu e²n^au X0 O qj co gf u|³/4²/
 u²tg0 ô Cf lc vx^add^a Cdf wn O gf| ukf q²udcp. j qi {
 gkuo gtk c pgo | gv { i²uv c v³/4³m fgo qnt^aelc cmqv/
 o^ap{ qu x²i tgj clv» u| gtx²pgm²u cī xgvk o ci^av j c/
 v³tq| cvcpcn0

O kpf g| gngv c hgn²vgrngv tpci c Mgo^an vgtlgu| vk
 gn Tghgv rcuc^ancn cnk vknqu²lc< 0x10 uĀi³/p{ dgp ner/
 v o gi c| wcu²uck0 O ci c Mgo^an q²lc rg g| gngv c
 t²u| n²vngv0

Cdf wn O gf| ukf o²n{ o gi kpf w²uucn j cmi cv0
 Pgo c|²tv. o kpy c j cdq| p²m j cpgo c|²tv. j qi {^av
 i qpf qdc gppgmc| »t^apcmc lgrgpv u²i²v0

Pgo Āi { l³/4w gn o kpv c| v x^atv0 Fg c|²tv gn/
 l³/4w g| c| »tc ku0 C vt»p³/4³/4²u d>rkpv²u ngl²v p{ Āv/
 lc Tghgv rcu^apcn0 G| w²p c| cī q²utc x^at» qm^a/
 p{ qmnk^a m²v^a u^a j q| hqi pcn0

P²j^ap{ »tc gn Āv^axcn o gi²tng| km c| cpi qtek
 uĀi³/p{ < c pgo | gv { i²u vknqu Ā²ugp. gi {j cpi Ācp
 o gi x^aru| vqwc nerkf^apcm Cdf wn O gf| ukf j gtegi
 vt»p³/4³/4²v0

Merkc vj^av o²i xcp c| qtu^ai²i²p0 Kc|. j qi {
 eucmc ngmgmhlgf gro g0

\ ukdqpi qw c x^atqu0 C Pci { Pgo | gvi { r^u Ār² /
ugl gwCpi qt^adcp0

Mgo^an xqnv c| gnu ul »pqn0 T³/₄klf o gi p{ k» dg/
ul²f w³p nklhlyvgv. o k²tv xqnv ul Ām²i c nerk^awuv
c ul w³pu^ai »n gr^arcu| vpk0 šGi { gf Ān c pgo | gv²t/
f gnt n xcp ul ». c| ^amco xgl gv²u o qf gtpk^a r^u Āt²n²u
pgo c| ul go²n²gu gmgpu| gp^{x2}t n XIO Oqj co gf k^apv.
xci { ²rr gp ô co kpv vcr³p xcrcnk i { cpcnqf j cv²m
ô c| nqt³rcp j cvcno k co d³ek³l^at»r0 ~i { ul »mqw=
Mgo^ar0| rr gp o ci c lgi { gl v³hgngo r²ngl²ugkdgp0

Xcrcnk³dgu »n<

ô C o qj co gf^ap xk³i dcp | exctqm v³4j gvpgm
nk j c j q| | ^ap{ Āwpm gj j gl c n²p{ gu xcm³uk²u n³4 lqi k
kpv²| o²p{ j gl 0 C rgi v³4d o²n»u^ai ul gpv o kpf gp
o q| rko gn w0

Gi { rgteli p²o c eugpf xcp0 C n³4 dgu »n» ukv
nkj cu| p^arpkc eugpf gv<

ô V³/₄³/₄nqtu^ai ucl^av xgl gv ul gtgr²v xgu²n²gl /
v³kc o q| rko xk³i dcp. j c gj j gl c n²tf²uj gl p{ Ār0

Mgo^an ô o ci c ³tlc ô j c tci qucp nk^anv rg c|
go gr^ap{ t nc n³4 dgu »n>c<

ô J c| wf kn# Gj j gl²tv#

O kxgn c pgo | gvi { r^u nkrpexgpnrpge ul^a| c³r²nc.
pgo eucm vku| vgrvd n fg o gi i { | f²ud n ku Mgo^an
p²| gv²p xcp<c n³4 dgu »r^u uc gnrgwg| | gnkpv²| xg0

O quv u t . k i cm cu u Āti ³p{ x^an^au n³4 gvngl kn0
Pgo c|²tv. o k³vj c xcrcno k gi²ul gp tgpfn³k Ārk xqrc
cddep. j qi { c ul w³p w»fc pgo gn fl²pgm j c³r²nc³
w³p. c| Q| o^ap/ j^a| j^a| k³4x²p{ glp gm²tv gm²dgp
r²r vt»ptc. j c pgo c| gm gpgm Ānv ul w³p ³/₄³/₄n³dg j g/
n²gl km ³/₄po ci wnev gttg ³/₄po ci wnev kng²v ngupgm ³/₄²n
ul gtxgm ô ³/₄kn³guo k²rr gp gr²i i { cntcp hqt³wv gn
c| w»ddk ³/₄xgp gu| vgp²dgp= ô pgo. pgo gl²tv
ngmgwgm c u Āti ³p{ ³/₄n0 C u Āti ³p{ ³/₄n hqto cu^ai qntc
²u m Ānu u^ai gntg xqpcvnu| pcn0 C u Āti ³p{ ³/₄ndgp c xk/
v³ti { c| uk ul qn²u²u c o qf gtp grxgm n³4 ³/₄vk
j cte=c i { | grgo v²to²ul gvugp pgo rgi gv²u²i gu0

C| »³/₄³/₄n³ c t²i k l» kf m c| ctc p{ nqt xku| /
ul cv²t²u²v x^at³m gw n c pgo guggp Q| o^ap/ cte Ā ul g/
rff vgnkpvv nerk³»r0 C o qf go gm c P { vi cv^a r^a /

uckv c o ci cucdd mwn^av j ku| gp o kpf p{^alcp wf/
^vm o gpp{lv m^af^{3/4}v²vg vt>p^{3/4}3/4^{1/4}u nqt^adcp. j qi {
 o ci c ku i {gto gngkku p{wi cko »f qp²ij guugp gn0

Cdf wn O gf| ulf uqj cugo ngt guv c p²r ul gt u²/
 i g0 O gi f^{3/4}ddgp k²u o gi kpf^{1/4}lc c ul gtgvvpgm gl c
 x^atcvcp nk^{3/4}2ug0 wi {cp ul wn^{1/4}ppcm xqrv lgr^{3/4}kg
 ô fg vci p. o²i lqdd ku ^{1/4}{. xk^{1/4}i k j cvci qo p²m^an
 c j ^{1/4}k mrgmkhlglf gr²pgmrgppk00

O wul vhc Mgo^an qw Cpi qt^adcp. pgo d^aplc c|
 Àlf qpu^av neri^{1/4}c^{3/4}o²v. ^{3/4}wf lc. o k hqi n^{1/4}kgvng| pl0
 Eucm gi { nku kf vgr²m gr0 C| go dgtv ukngt^{1/4}gi {^{3/4}
 | grgo kcu^a ul qm^{1/4}mvppk0

R^at j²v o Àxc dgr^{1/4}u|^{3/4}p^{3/4}v^{1/4}c p{wi c k À²x c|
 gl gtnk^{1/4}peu^a| j wul qpj cto cf km²x ng| fgv g0 V^{3/4}3/4^{1/4}u/
 u^ai dcp gl kf^{1/4}lv ngj ggvvpp n^{1/4}lqi k j gn| gv^am hgpp0
 K0 Cdf wn O gf| ulf gi {gn tg eucm neri^{1/4}c. fg c p²r
 vto²ul gvgupgm xgul k j qi { c| kf o À¹u^axcn²u c
 xku qp{qm j gn|tg|^{3/4}mgp²u²xgn c xqrv vt>p^{3/4}3/4^{1/4}u c
 neri^{1/4}c o²n^{1/4}u^ai^aj q| c ul wn^{1/4}pk e^{1/4}o gv ku hgn hji lc
 xgppk0 Wf xctvt^{1/4}uc. o n^{1/4}f²ug. ul²nj gn| g. Ài {ku
 vgrlgup j cuqpn^a c ul wn^{1/4}p²j q| 0 Cdf wn O gf| ulf r¹v
 ul »ci l» xku qp{dcp xcp Mgo^ancr0 U go²n| gu²tkp v
 ng|²u^am wi {cp ki gp tknc. fg c nqto^ap{ n^{1/4}u|u²i g/
 ugp²u gn|²ngp{gp ul cxc| v o gi gff ki c| wf xct/
 vt^{1/4}u n^{1/4}u²i gk0

C| À neri^{1/4}c p²r ul gt u²i g p w^{3/4}p p 0 J c ul g/
 r¹o rku^{1/4}v vtv. o^ao qtqucp²rlgp| v^{3/4}o gi uqthrc n^{1/4}/
 |^{3/4}v j crf c nqeu^{1/4}lc0 Grj crv q| |^am cl^apf²nqmcn
 pgo eucm c M^{3/4}gr²u V^axqmrgvpp²n j^{1/4}kgk j cpgo
 c| cpi qtck n^{1/4}r xlu^{1/4}gn m ku j^acu^{1/4}xcn^{1/4}v²u o^au²t^{1/4}/
 ngu²u ngf xgu cl^apf²nqncv m^ar^{1/4}gpgn0

C neri^{1/4}c p²j c dg^an c| ^anc o k f^{1/4}u| eu>pcndc²u
^av^{1/4}xg| gv c| ^aulck qrf crtc. j qi { c| qwcpk pci {
 vku vgrgdgp^am» vgo r nqo qndcp grv qpf lc r²p^{1/4}gnk
 ko^ak0 K^af nq| vcv< šc t²ul gi gn^{1/4}tv. c wf cvcpu^ai wn^{1/4}
 dcp i { n^{1/4}3/4^{1/4} n^{1/4}tv. c| gt ugm tcdul qri^ak^{1/4}t^{1/4}ô
 co kp v gl h r crk n^{1/4}grgu²i g0 U ki qt^acp o gi vctlc c
 j cv^{1/4}txqpcrv c| gi {j^ak²u c xk^{1/4}i k ngi h dd j cvci qo <
 c neri^{1/4} wu²u c ul wn^{1/4}pu^ai n^{1/4}3/4^{1/4}o

C Fqm c/Dci eug rcmq²u Cpi »tc n³/₄ w gi {g/ n tg vglgu c| gi {g²tv²u0 Gi {o^auw³p u| \tilde{A} ngvpgm o gi c tghqto qm co gn(gm n³/₄ \tilde{A} n ki gp pci { lgrgpv u²i < gl gpv \tilde{A} n v³/₄ m \tilde{A} n c pgo | gvk p{grxgp ku ngj gv ko^af nq| / pk c jci {qo^ap{qu cted p{grx jgn(gw0 C xcm³u \tilde{A} i {k o loku v²tkwo . c n³/₄ qmcv³u \tilde{A} i {k o loku v²tkwo . c rcr/ u³i . c| gi {gvgo gm c u| gt| gvutgpf gm c vgn>i lck h / kunqr³m c| »t³uk xcm³uk xci {qpcrcr \tilde{A} x^ap{qm m \tilde{A} n³/₄ p hgn \tilde{A} i {gn o loku v²tkwo c< gi {v n'gi {ki i {³/₄ngtgu tg/ hqto qnqp o gppgmngtgu v \tilde{A} n0

C| \tilde{A} l V³/₄ ³/₄ nqtu^ai l³/₄ xgpf dgrk jcv lgn| exc n³/₄ | \tilde{A} n p²i {pgm²tvgn²dgp c pgo | gvk p²rk gcvknc. tg/ hqto kvc V³/₄ ³/₄ nqtu^ai ngl f nkrnmwpk0 Mgw gl gm³ d nc| qpdc p o²i j^atc xcp 00

C| \tilde{A} l merk³ ô co kvv gl v crvxcn³k²u v »ptc/ ugi \tilde{A} v k gi {ct^apv tgo²n²m ô vku| vgrgdgp vctvc c o ci cu gi {j^a| o²n »u^ai^axcn l^at » uk jci {qo^ap{qncv Fg pgo^am \tilde{A} l^adcp gi {gvrgp tghqto pcm ugo 0 C j c/ | ck²u m \tilde{A} n³/₄ f k ucl » gi {j cpi \tilde{A} cp grkuo gtk jqi { u| g/ o²n²dgp nkx^an » go dgt lwqw c merk³v »ptc0 Merk³ ²u pgo u| wv³p ô fg o²i ku hglgfgrgo . cnk vku| vgrg/ vgvwf u| gtgl pko²n »u^ai^apcn0

O wu| vhc Mgo^an rcuc gn³/₄ dgp Cpi »t^adcp ô eugpf gup. co kvv u| qmc ô pci { eugrgngf g²tg n³/₄ u| \tilde{A} n f³/₄0

C| w »ddk²xgm gnu pci { vgw c i³/₄ ³/₄ n gi { / |²ug xqn0 C o^auqf km XK0 Oqj co gf u| wv³p gn q| f \tilde{A} v³uc0

C jcto cfkm o quv o²i eucm rtqi tco 0 G| v c rtqi tco qv c| qpdc p o gi hqi lc xcn »u \tilde{A} cpk c| c| go / dgt. cnkpgmgf f ki ku o lpf gp ukngt \tilde{A} n0

O wu| vhc Mgo^an c rt²o mveuo^au. n³mwj^au v³/ dqtpqm/h xg|²t ô \tilde{A} i { l^at o quv ³/₄ n³/₄ xg. ô »t³ukv p w c| »c. co kvc Uco uwpdc p rctvcu^am0 Cmqt eucm nkx²vrgu o gi jcvrn c|^auqm xqncm c |ugd²dgp< c p{qo^adcp o gi gnhqi cv³uk rctcpeu0 O quv c| qpdc p o^at pgo hgmgn²u pgo p²rxg|²t0 Pci {u| cd^au \tilde{A}

^amco h²tk0 Cnk Āl. o qf gtp ^amco u| gtxg|²u²tg n²/
u| Āl0

Gppgm c| Āl^au| gtxg|²upgm ngi h dd cncf^an{c c
v³4³m gi {j^a|²u c t²i k v³4³m xk^ai hgrhqi^au0 C ngw
u| qtqucp ³4u| gh²i i0 Oqj co gf rt»h²c xcn^auc eugp/
f lgu. n²4³o d³4u. u| go r²n f . x^atcnq| » lgn²o gngv pg/
xgn0 G| gmgⁿ r g f ki pgo ngj gv tqj co r²r²udgp j cncf/
pk= g| gngv pgo ngj gv c| ^amco i²r g| gvdg r qpvqucp o /
n²4 ngtgngm²pv dg^an²cpk ô ²u h n²r gp ô pgo ng/
j gv xgn^am euc^av p{gtpk0 Ugo j cte²tkv ugo r qrk^a
nck0

Mgo ^an vj^av m²Ā f gm gu ²ngv gi {km x²i u pci {
m²Ā f gm g gn w ^am0 Pgo wfvc ²u pgo ku wfj cvc.
j qi { o²i g| gpn²Ān ku o gpp{k j cte x^at t^a0 Fg gi {g/
n tg. o kvv o kvf ki . o quv ku gnu t^api Ā vcmknwupcm dk/
| qp{w0 C ngi cmcm cucdd nupvgn^aek^am r kncpcv^adcp
kv²qvc o gi c| qhgp²Ā^av= gi { r kncpcwcn ugo n²/
u dd. gi { r kncpcwcnugo j co ctcd0

C v³4³m ^amco hqto c gddgp c| kf dgp o gi ngj gv /
ugp | exctqu0 Xk0 Oqj co gf ngo qpfqw ²u vt»pl^apcm
v³4x²p{gu ³4³n²4ug rcnkm c Fqm c/Dci eugdcp. u| gn^ao /
rknqv vctv ²u ô k0 Cdf vn O gf| ukf u| vn^ap w^ap ô
l0Cdf vnO gf| ukf pgkmpgxg| ko ci^a v0

C| cpcw^ark h²fo xgupgm ²u c mxf v³4| uh /
p³4npgm vto ²u| gvugp hqi cm c ukpeu. o k c m²Ā²pdu²i
W0 Cdf vn O gf| ukf u| vn^ap ²u k0 Cdf vn O gf| ukf m²t
rk^a n²4³4w0 C nqj| gtxcv²Āk Āk p²r l»t²u| g r g f ki ô
m²Ā²p³4ugp c h x^atqu rcnqu^ai c ô pgo d^app^a. j c
o gi u| ppg g| c m²Ā²pdu²i0 C m²rk^a j cvcm^apcm ²u
lqi n²4²pgm nkg²lgul²ug o gngw ci k^arpm c r r qm
ku. c j ci {qo^ap{qm j kv^aqu t| k0 J qf| uc r g f ki
pgo eucm Mqpu^avp^ar qn{dcp xcp. j cpgo Mku^a| uk
o kvf gp grf wi qwlcw^aun^al^a dcp ku0

C xgu| gf gm gv pgo ngj gv rgn^aekp{gtpk0 Mgo ^an
r cuc hgm²u| Anc f³pv o²tm|²utg0

Fg n²4 dgl³p o²i gi { o^aukm^atcvcp gugo ²p{ ku0

C nerkhc x^areul v^a u gn w j^atqo perrcn Ænv wi {cp/
 ku 3/4u| g. c rewucppgk nuphgtgpek0 Gppgm ngngw xqñ/
 pc c| Æ 2rgtg ngiv V3/43/4ntul^ai cpwcv/gkuo gtv g j c/
 v^atck hgn n j cv^atq| pk 2u o gi ngngw xqpc^a ncr ¶|cplc
 c| v c xku| qp{v ku. co gn{dgp V3/43/4ntul^ai c x²i gtgf/
 o²p{dgp o²i ku eucm i { |vgu gw>rck pci {j cvcm cm
 nen^a n0 Fg c v3/43/4m fgrgi^a ek» pgo xqiv j clncpf» gn/
 kuo gtpk c| qnev c n3/4grg| gwu²i gngv co gn{gngv gn |
 nuto^a p{qm x^a ncnm c ncrqw n3/4eu3/4p3/4m hgl² dgp0 C
 fgrgi^a ek» c rgj gv rgj cv^atq| qweddep vknenu| qw r²n/
 f^awn c v3/43/4m fqj^a p{l3/4kgf² npgm g| gp c e¶b gp xcn»
 rghqi rnf uc gngp= c| gngp t|²uv ugo v tk vx^a dd c|
 Qwqo^a p Dcpmhgrgw0

Cddcp ku ki c| c xqiv c v3/43/4m mÆf 3/4w²i pgm j qi {
 nuto^a p{c pgx² dgp ¶²mg|² uk lqi qv n3/4kgvgnv c| qt/
 u^ai dcp 2n kf gi gp c rwxcn»m h3/43/4w ku0 Cddcp c| qp/
 dcp ô rgi cn^a ddu c u| ki qt Æ cpi qn 2u htcpek hgrh/
 i^a u u| gtpv ô pgo xqiv ki c| c. j qi { c n3/4u| r²p| dgp
 hgrkgw n3/4eu3/4p3/4ngv gi {^a ncn^a p pgo cnetlc xku| c/
 h| gvpk0 C v3/43/4m^a nro rcr ¶|qm ¶| { vgrdgup 2tv mÆgv
 xgu| km ô g| rgf ki u| kpvg r²p| Æ {k nvcu| v»l^a pcm
 u^a o ¶|0

C rewucppgk nuphgtgpek vgi^a v j^atqo jcxk xkev/
 nu|^a u 2u cmwf q|^a u w^a p x²itg ku gtgfo² p{ p² mÆn
 u² rfv u² v0 C fgrgi^a wuqm j c| cwcl vcm= nknk c o c/
 i c qtu^a i^a dc0C v3/43/4mo gi d¶| qwcmku j c| c² tng| vgn0

Mgo^a n 2u c v3/43/4m²i v3/4ddgv x^a tv c nuphgtgpek² w»n0
 Hgn² rgn² uv. rqrkknk 2u cp{ci k n3/4grg| gwu²i gm hgn/
 qrf q|^a u^a v x^a tv^a n0 C eu fpgm ku pngx| j gv gtgfo² p{/
 vgrpu²i g| gn u| go dgp pci {hqm Æ gr²i gf gvrpu²i gv
 qnu| qw0 Ok j cu| pwpm c pci { i { |grv gnd n ô n3/4t/
 fg| igw² m c v3/43/4m j c| chcm ô j c pgo 2rk| j gv Æm
 c i { Ao 3/4eugk Æ

Mgo^a n kvtcpu| ki gpu rqrkkn² l^a pcm ng| f vgm gngp/
 | k v^a o cf pk0 Okp v tgpfgup. 2rrgp c| qm^a dt^a pf wncm
 nk 2u x^a ncm gngp|² nk². cnkm xgrg gi {u| gttg kpf w/
 vcm Æpcm 2u Æi { 2tg| v² nk c| kpf w^a unqt m cf vcm
 u| go 2n² pgmu Æn v² u vgnkv² n{ v0

Hn² ngp{ngf² u. i {cpcnx^a u v^a o cf v o kv o kv/
 fgp u² f Ævgu go gmgf² u p{qo^a dcp0 Ok² tv fgvqpk/

|^ancwc c ul w^apv Mgo^an jc pgo gpi gf vg w»f^{1a}/
pcmc t»pvgrhqi rrp⁰X^allqp pgo o ci c^{000A}

O kpf gp vgrj cvr⁰ À j cf xg²tt n nqto^ap{| »/
t»n o kpf gp f km^avqt⁰n c|v uwwqi lc c| kki {u²i. LÄ/
rkwu Ecgu²u P cr »rgqp »vc0

ZZ0Mgo^anj^a/cu^ai c0

Gmqt x^atcv⁰rp fq^aqi v^{3/4}v²pv0 Mgo^an c| cii/
rgi²p{ p dca^av o kpf ki i^an¹pu j »fq^alc xqrv c p k
pgo pgm fg g f ki pgo²tf gm f^{3/4}w uqj c gi { dkq/
p{qu p k^apv< o quv x^atcv⁰rw o gi j^a| cuqf qw0 Hgrg/
u²i ãn xgwg Ncvk² J cpwo qv. gi { f ãu c| fci ul o k/
pck rqi^ateu^af pci {tcv^{3/4}. co dle»|wu. Gwt»r^adcp
pgxgm^agf gw ng^ap{^a0 Ven^ap flp⁰cu^av cnet crer ¶cpkA
ô n¹tf km gttg Mgo^an kki {gk0 | rr l»nqt# ô vgl km
j q| |^a c tq^aul o^al ãn0

C pgi {xgpn²v²xgu O wul vchc Mgo^an ij^a|k ô
*gl v c ši { | ð o gn²np^axgv ncrw o²i i^{3/4}3/4 i { /
| gm gk²tv c pgo | gi { n¹uv n¹ ô vg^av o²i ku x^atcv
rpw⁰ o gi p u^an0 Mk i qpf qnc xqrc. j qi { xcrcj c
gl ku hqi v^{3/4}v²ppkA

Kc|. j qi { c| gi²ul kpn¹dd ncrpf xqrv o kpv
j^a|cu^ai0 G|v o c o^at pgo ku vkn^arlc c v^{3/4}3/4m v^{3/4}v²/
pgrgo 0C j^a|cu^ai kf vctw c c ku pci {qp t³klf xq^an0

Mgo^an jkxcv^aqu²rgvcl ¶»lc. Okmw^aej gl vA
o qpf lc c ši j^a|k⁰ euqf^arvqu. j kvgrgp ng|f f^{3/4}w²u
j kvgrgp dghgl f^{3/4}wj^a|cu^ai^at»n<

ô O²i U o kpc xku^al chqi r^auc kf gl²dgp v^{3/4}v²pv.
j qi { c ij^a|k²u h xg²t c x^atqu n^{1/4}2rrqp^adcp
Ã^{3/4}wg hgn h j cf ku^an¹u^a0 O kpf^{1a}tv c o^auqf km xci {
jcto cf km perqp o gi lgrgpv qw gi { hcvn j^{3/4}i {0 C
h rctep^aqm n¹x^apv dgu²rp⁰Dg ku gpi gf v²m c
h rctep^aqm gr⁰C| k^{1a} n¹p{ o gi n¹tv² c ij^a|k.
vgi {g^avul^an¹u^avc| j^a|w^alc0

ô C hcvn n¹p{ gm gu²ng. j qi { t³klf fgn gl gn w
v²tv xku^alc Dk¹tk|d»n U o k^adc0 U ãngk o²i qw
o ctfv²m Hcpek^aqtu^ai dc0 U o kpc gmqt o²i c
i^{3/4}3/4 eucrv^aqm p{qo^auc crw^an¹w0 Cddep c pci {

j^a|dcp. co gn(dgp Ncvk² rncq^w 2u cj qn eucm ngx²u
 ul qni cu|go 2n|gv ul qni^anv hgn uqnev ngn^wgw v tpg⁰
 C i^{3/4}h rctcpeupqm o gi i{cp^Àqwc. jqi{ c n^{3/4}
 |grgf v^{3/4}m^{3/4}ngm j¹ngv ul^an¹ C j^a|cv v^{3/4}dd cn/
 n¹o o cn^av ku n^wcv^am^ancpf»cp xli^a|vcm 2u
 ngv^wm t^a0 O kpf gp r kncpvcdep hgn¹qj cv^wm xqpc c
 n¹p{v⁰ C|qpdep Ncvk² d^avcp nkctvq^w 2u c|v ugo
 n¹l²tgn^w o gi. jqi{ gnl^{3/4}n²n⁰ C dlcttk|k xk^ao
 perqm w^ap U|okpc x²i gv²tpk pgo cnet» u^{3/4}v
^aqo ngw vrg h²rgo o gn 2u klgv²i i gn⁰ Gmqt hq/
 icfvc o gi c n¹p{. jqi{ O wul vhc Mgo^anv j^a|^adc
 hqilc kpxk^apk jc ukngt^Àn Mgo^apcm o kv i{|v/
 pgmU|okp^adc dgxqpwpk⁰

O wul vhc Mgo^an gngkpv pgo hqicfvc gn Ncvk²
 cl^aprv^av⁰ Gnu o gi nrgv²u²dgp v¹p hgn^adqtqf qw
 nku² c h¹vcn n¹p{ xcn⁰gt u²i²p⁰ O qj co gf^ap p n/
 p²n c| kn(gp gn^at^au. n¹cn¹ddku ul qn¹vcp⁰ C n^ap{
 ul ^Àngkpm pgx²v l»n kuo gtvg= c n^ap{ o ci^av Ncvk²
 šJ cpwo pcn⁰ pgxg|vg⁰ Ncvk² pgo jci{vc o ci^av gn/
 wcu¹cpk 2u o cn¹unqf qw. jqi{ c jcf¹tev o gi/
 gt ngv²ug w^ap rkj gp²utg 2u p{wicq⁰tc xcp ul ^Àn/
 u²ig c i k^a|kpcn⁰ Gttg c o quvcpk h jcfku^an¹u c x^a/
 tqu |clqu dngl²dgp pgo cm¹cu⁰ ô O kn^{3/4}dgp
 Mgo^an o²i jcdq|qw. i qpf qm¹|qw c| cl^aprv gnhq/
 icf^au^ap. c n^ap{ c p{cn¹dcp n¹i» o gfc¹mp w^ap
 p{^Àn⁰ Mlp{kqwc 2u o gi o wv¹c c ij^a|kpcn⁰ Mgo^an
 cten¹rg xqnv dgppg⁰ šTgo²ngo. gl pgo ngn⁰g^wgp
^{3/4}ppgm^À M²tf gl v⁰ o quv c n^ap{ nku² gnhq|»fxc⁰
 Vgto 2u|gvu. jqi{ ul» ugo n¹gv^w šngn⁰g^wgp²i/
 t n⁰ C ij^a|kpgxgv^w 2u dnggi{|gl gw c n^ap{ n¹t²/
 u²pgmv¹gu¹u²dg⁰

ô C euc¹f xkn¹lc ô c n^ap{ cv¹lc gi{²dn¹pv
 jcl>i{^atqu. U|okpc gi{kn n¹i c|fci cdd go dgtg ô
 c x^atquqp n¹k^Àn hgn¹v gi{ f qo dqp⁰ Pci{ulgt nk/
 n¹v^a p{¹v kppgp c vpi gttg⁰ Jq||^av¹q|qw gi{
 hguv k ul²r²i »v^{3/4}m ngtv c H⁴f n^{3/4}k/vpi gt f ^Àn
 p^{3/4}2p{|gv²xgn vttcu|qm¹en p{k^w xgtcpf^am¹en gh^w/
 vcm i h¹epk^ancm t>|u^ancm 2u l^a|okpncm v¹ne
 ngxgt²n¹xgn n^{3/4}À²xg⁰ O wul vhc Mgo^an ul ngdd
 v^{3/4}|u²xgn dgxqpww gddg c| ^Ànx^at²n{dc⁰ Ncvk² j^a|c

m̄Au| 3/4²p hqi cf vc= c x^atqu ul cdcf 1^av t²i k ngrgvk
 ul qn³uqnj q| n²r guv Æx³4³mg< o²n²u²i i cn vku| vg/
 rgvc^a ucr0 O kpf gl c ng^ap{p^an vku| vc. jcto qpkmw gi //
 u²i i² qnxf v³4u| g0

ô C ng^ap{ pgo xqrv o ci cup³4²u 0 kpn²dd gt u.
 o kpv i {gpi²f0 C o qj co gf^ap p m twj^al^av j qtf vc.
 c| qpdep l²v{qn p²m̄An co kpv gl cmnqt kdep c hgnk²/
 i quwv o ci cucdd t²vgi gndgp ul qn³u xqn0 C hngvg
 hngvpf jcv²uqcp hqi vc n²4²An c hgi²t. vgnv cteqv=
 ul^al²u^am ô nku² v²q wcp gt ugm gi { j Æu²xgu
 n²p{j q| n²r guv ô . o clf pgo l²thku gt²n{t n vcp²u/
 nqf vcn0 Mgo²p{²u d²u| ng gl c ul^al0 Ncvk² ul go k
 o gi ngr gp ul²rgm² pci {qm tci {qi »cm o²n{ dctpc
 ul 1² gm wi {cpcmqt xcrc k ucl^au^ai qu. gl Æv/
 ul Æng l²p{dgp ku tci {qi vcn= vgnkpvvg nqo qn²u
 qmqu0

ô O wu| vhc Mgo^anv Æl qwj qp^adcp ul gtgv Hki {g/
 ngo²u i qpf qu^ai xgwg n²4²Æ0 O ci c c j^a| Æp lg
 c| qpdep n²vj cvwcp o ctefv0 Mgo^an n²r vgp p{qo qp
²tgl vg c ng^ap{ i qpf qu^au^au^a0 O kpf gp. co k c h xgl²t
 gi²u| u²i²pgm^avj cvw ô²u c h xgl²t xclo k ngx²u
 hki {gm gv ul qmquw gppgm ul gpv²pk ô²v²xqn o ctefv
 v ng0 Mgo^an c| qpdep pgo ul qmc o gi. jqi { n²k^ap/
 u^ai ckv pg vrgu²u²m²u ul ki qt Ædd rctpeuqnev cf qw
 n0 Gt go²p{g c| qpdep pgo xqrv ctepeucl²cm00

ô C| cnetev go dgt²tg gl o²n{ jcv²uv i {cnq/
 tqn0 M²4 ggdtd n »j clvqc o quv o^at o gi kuo gtpk c
 hcvn n²p{v cnk qn{cp l»n²tvwg c o »fl^av. jqi {
 c| qm»n cnkm v nku| qn^an^am gpi gf gm gu²i gv gt /
 ul cnqrlqp n0 C| gnu dgu²ni gv²utg Æcdd dgu²ni g/
 v²ugm n²4²gvng| vgn0 O wu| vhc Mgo^an Ncvk²dgp ki gp
 o xgnv²u²rgu kpv²ki gpe^al^a cuu| qp{v kuo gtv o gi.
 tci {qi » v²tucv dgu²ni gv²ugmtg²u xk^amtc0 O kpf/
 gl gndgp c ng^ap{. pgo gi { l²thkxgn ul go dgp l²4²p{/
 dgp ku xqrv Mgo^an n²4²p{gl gv²dgp= Ncvk² gn| rgi c
 nqpu²cpv²r qn{k co gtnck nq²n²i kwo qv x²i gl vg gn
 c| w^ap Hcpekcqtu^ai dcp pgxgnv²n0 Uqnev wc| qw
²u R^atk udcp r^at²xli lqi qvku vcpw0

ô C|. jqi { Ncvk² nk^ap gp dgu²nv kf gi gp
 p{grkngv Mgo^anu^ao^atc ku pci {qp hqvqu ngw0

G| gm c| gugo ²p{gm wi {cpku ²rrgp cmqtkdcp ³4/
²vpgm co knqt Cpi r^kxcn u| go dgp c ³4³m rqrk^knc
 o ci cuhgu ²Am²i g ^amqw hpp0 Ncvk² o quv O wu| vhc
 Mgo ^an vkn²tp lg rgw0 Mkv p gp hqtf²qwc c ij^a|k
 fkr²qo ^aelckrgxgrg²ugk0

ô C| gi {Awgu o wpnc ³4u| gi q| vc rgw0 O wu| /
 vhc Mgo ^an pgo vknqnc. jqi { o kpv p ku grp{gtvg
 vgu²u²v0 —i { r²u| qw Ncvk² g| v u| ²kgugp ku jcm/
 icvlc0 Co kf p c| qpdcp Mgo ^an vx^add cnetv jcrf²pk
 ngtgm špgo ô xqnv c x^aru| 0 C hcvn r^ap{ gm²p^am²uc
 rgi { |jgvrgp xqn0 O kpf gpv gm qpfqw c| qpdcp.
 co k c u| ²k²p hgm²f v0 Mgo ^an ku o gi o qpf vc pgnk=
 o gi gun²f³4v. jqi { jco ct^add pgo hqi o gi j^a|c/
 uqf pk o ²i ²rgvo wpm²lc c o gi n²4gpf d²n²xgn dg
 pgo hglg| fkn0 C r^ap{ c| v x^aru| qnc. jqi { c|
 grk²ku rgi kpn²dd qn{cp u²qum ô c| u^ao^atc0
 Xci { Mgo ^an hrgu²i g ru|. xci { ô ²u gl| gn dgxc/
 r²vc Mgo ^apcm jclrcpf²u^ai^av ô uqj c pgo hqi
 k²tj| g| o gppk0 Mgo ^an u| gtgv lg c| qpdcp pgo cnetv
 rgppk0

ô Gi {kn²Am ugo gpi gf gw ô ²u ²i { O wu| vhc
 Mgo ^anc| ^ap pgo uq²tc gnku wc| qw U o k²p^ad²r0

ô (00) L² kf gngnv cp²m²Am J qi { U o k²p^adc
 r²x²n ²tng| gw xqipc Mgo ^an²r0 Ncvk² gi {gf ²Am o c/
 tcf v d^apcv^axcn ²u x²i Am ku ctte i qpfqnv. jqi { c
 o gi ng| fgw gi {gvgo k vcpw^ap{qnev o gi kpv hqn/
 vcpkhqi lc R^atk²udcp0

ô O wu| vhc Mgo ^an o^at t²i gp Cpi qt^adcp xqn0
 Gi { u| ²r perqp x^atevrpwn nkcfvc c rctcpeuq< n²/
 u| ²u²m gn wc| ^au^a# Gi { ²t^axcn c| w^ap gn ku wc| qw
 Cpi qt^ad²n ô ugpnk ugo w²vc. o k²tv ²u jqx^a0 Mgt²Am
 Am²q²tng| gw U o k²p^adc0 C²ri jqi { o gi ²tng| gw
 o gi lgrgpv Ncvk² xkn²l^adcp ²u ²i { w²vc l³4gvrg
 e²i^a< šTgpfdgp xcp. o gi hqi wpm gun²f²pk0 Co k/
 f p c o gi rgrg²uv n p²o c Ncvk² u| ²v²rpwn qw ^anv
 gn wg. c o ci c xcunqu o qfqt^adcp o²i jq| ^avgwg<
 š| urgfki c| qppcn o kpf gp j²mwu| /r²mwu| p²m²Am | u
 ugpnkpgmugo lgrgpv²Am²dg gn tg0

ô ²i { ku ³4²pv0

ô (00) Mgt²p^ar²m p^au| Am c hgf Am cpc²rck xk

f²ngp xg|vgw^a0 Ogi^amcm c hckndcp= O wu|vch
 Mgo^an c rctcu|vqmn grgi {gf gw dgu²fdg. o gi /
 jcmi cwc rcpcl|cknev²u o gi o qpfqwc c|v ku. o kv
 x^at xku|qpv v n²0 C|qpcp ugj qn o²i c x^atquqm
 dcp ugo. cj qn c ij^a|k o gi lgrpv gi {gvrgp n²tf²uk
 ugo kv²|vgm j q||^a c o gmrgw^am» p tg xqpcvq|»/
 rci 0 Mvqpc rct^af²mp^an Ncvk² c| qfcm o gmrgw nq/
 xci qn. o kv cflw^apuc< eum ¶ { wfv^am o gi rucp
 c vku|vgm j qi { o gi p u²0

ô ĩ { rgw Ncvk² Jcpwo O wu|vch Mgo^an jk/
 xgug0 Fg o²i v³/dd ku rgw0 C špci { go dgtō o wpnc/
 v³tup lg0 O wu|vch Mgo^an o kpl^atv c ucl^av r²if^al^ap
 cnetv o gi o wcvpk jqi { c t²ik nrgvk n²4³/w²i gm
 pgm co gn|gm c| cuu|qp{qntc xqpcvq| vcm gi {u|gt/
 uo kpf gpnatc x²i gv xgvw0 O gi cnetv o wcvpk
 jqi { c| cuu|qp{ g|gpv^an v³tucfcm kci²u go dgtk
 rgi ku gi {gplqi qu²xc. c h²thcm qfcm^ap^am V³4³m
 qtu^ai dcp0

O²i Mgo^an dqrqi o²|gujgvk crw v³4²pv.
 jqi { c t²ik xqnv eu^au^atk v³dqtpqnm²u wfv²ctk go /
 dgtgm cnkndgp o²i²nv ucl^av u|go²n{k²i Ām hqvqu/
 u^ai^apcm go r²ng²u cnkm o gi xqncm i { | f xg t»rc.
 jqi { Mgo^an p²m²Ām šugo o kg ugo xkwg xqpcō ô
 gi {tg v³/ddgv u^ai vcm/d^ai vcm vkndcp0 P {h²cp gi {
 hgo q|fwcwn ugo^atw^am gn gr²i gf gvpu²i Āngv0
 P go ku vj gw²m xqpc. o gtv Mgo^an r^atcvcp p²ru|g/
 t u²i g gi {u|gt gp o gi ugo o ku²vgw xqpc ngv. o²i /
 h²k k²tvrgo dgp ku0

C| gr²i gf gvppgm o gi xqncm i { | f xg jqi {
 Mgo^ano quvo^at Āl f kpcu|v²venet crer ¶cp²0

Mqpuvvp^ar qn| pci {x^atqu= kw n²pp{gdd vk/
 nqu v²n²mq|»nev tgpfg|pk o kv c| cpcv²ck nkun²4 /
 u²i gmdgp. cj qn xkj etv n²xtv o²i gi { x²|dgi wmqw
 u|cm cu^an ku0 C h x^atqudcp fwi^am vj^av³/u|g hg/
 l²ngv Tghv rcuc²u c| gwt»rck gi {gvgo gp fqmqt^anv
 ft0 Cfpcp dgl. c Mgo^an n²to^ap{ nqpuvvp^ar qn|k
 n²to^ap{dk vqck= Tcwh dgl. c xk²i j^adqt^a rgi gpf^au/

j[¶] jcfkjcl>rtcpeupqne ô c v^{3/4}ddk t²ik o gi i {^{3/4}
ngtgugf gw ²u l[¶]n[¶]dd ^av[¶]gugw. o kpv ^avc[¶]mwv wf/
xctkgo dgtgmngni {[¶]Aw0

Tghv ruc o ci c ku ut p hqtfwv o gi c Fqno c
Dci eugdcp= c j>fqrcw>n jcrfqn[¶]rc dgu²nv c m[¶]rkf/
xcn= tgpfgvgkdgp ku r[¶]rvgp/p{qo qp ²u|tgxgppk c
u¹a pf²nqu ²u j cpi u[¶]ñ{q|qwcp o ²n{u²i gu vku|vgrv/
p{kx^ap[¶]v[¶]u0 Tcwh dgl o ci c. »xcvqu[¶]id>n gi {gn tg
n[¶]vm[¶]rcuqu r qrk[¶]n[¶]v hq[¶]v< Cpi>^adcp Mgp[¶]k^an
lqddng|g ²u jgn|gwgug. Mqpvcp[¶]q^arqn{dcp r g f ki
gi / cpi qn o k[¶]v[¶]tc u|gtxg|gw ^amco t>n ^adt^apfq|km
o gn{pgm m[¶]rk[¶]lc ô xci { u|w[¶]v[¶]plc< o kv jcv[¶]tq| c
n[¶]hgl²uAô šw[¶]cm[¶]f km f g pgo n[¶]to ^ap{q|ô0

O kpf gp f kmcv[¶]tc n[¶]rcmw[¶]ucnqt cnef gi {
euco » go dgt ô u|cd^an|u|gt gp c t²ik r^atj[¶]kxm
n[¶]k[¶]ñ[¶] ô cnk cn[¶]t j c|chku ci i qfcmo d>n cn[¶]t
k[¶]ki {u²id n ²u l[¶]n[¶]ngp{u²id n o girt>^adc c| ²i ki /
²t hc v^{3/4}|u²v xku|cp{qo pk ô xci { ^ah t²u|g[¶]pl0
K[¶]gpnqt c| c i | v[¶]u. cnk i {qtucddcp wf eug[¶]g/
ngfpl0 Mgo ^an r g f ki xkn[¶]o i {qtu c| g[¶]jcv[¶]tq|^audcp
ku. c n[¶]k[¶]gndgp ku0C| gu n[¶]4 ^{3/4}ngvpgo pci {qp p²|k0

!rrgp c v^{3/4}^{3/4}m fngi ^aek[¶] xku|c²tng²ug w³p
ng|f f^{3/4}v Cpi>^adcp c u|qn[¶]uqu ²xk n[¶]4[¶]u²i xg[¶]uk
xkc0 K[¶]gpnqt ngt[¶]Ap[¶]gm c f^{3/4}pv hqpvqu[¶]i[¶]À m[¶]ñ[¶]rk/
v[¶]nek ²u dgr qrk[¶]nek n[¶]tf²ugm ku h[¶]rgv²utg ²u o gi /
xkc[¶]utc0 K[¶]v tqddecvcm nk c| gm[¶]p²vgn0 Tcwh dgl
xqnv c hglg c pci {qp xc[¶]gt. fg u¹a o tc ngx²u gn/
ngp|²npgn0 U[¶]ñ[¶]k n[¶]r xkugn. m[¶]ñ[¶]pdgp o qj co gf^ap
rgn[¶]u|. hpcv[¶]kwucp ^anv nk c rcr[¶]i n[¶]k[¶]a p[¶]ic. c
t²ik o qpctej k[¶] v[¶]rgu jgn{tg^an[¶]v[¶]uc o gm[¶]g0 J gxgu
lg[¶]pgv[¶]gm n[¶]4 dgp [¶]ñ[¶]ug|gw c rct[¶]co gpv. c| gm[¶]p/
h[¶]ngm ô cn[¶]teucm c o ci cunw[¶]ñ[¶]l^al^a P{wi cvqp ô
u[¶]ñ[¶]qu i qtqo dcu[¶]i qn[¶]v xci fcn[¶]cm gi {o ^au h[¶]l²j|g|0
C| [¶]ñ[¶]ugm pgo wf[¶]cm ugo o k r q| k[¶]k gtgf o ²p{v
rtqf w[¶]ñ[¶]pk ô Mgo ^an j cmi cvqw ²u x^at[¶]0 O²i pgo
l^{3/4}vgn[¶]| [¶]l[¶]cd[¶] eug[¶]gnx²u k f glg0

Rqpvucp cddec c| >^adcp. co gn{dgp ngngw
ugo gn dd. ugo n[¶]u dd gi { r k[¶]pcwcn ugo < ²llgn
v[¶]ghqpp j[¶]k[¶]vc v^{3/4}u|g. dk[¶]cm cu v[¶]n[¶]t^axen c o ci c

tgpf ĀngvǝpĀn j r^a t^v j ʎk^gk⁰ R^a t^v x^g | g^v n^v v. n^r r^x l^g /
n n^v 0 C | ² l^u | cⁿ e^k v^p a^e uⁿ | a^u g^t g^f o² p[{] gⁿ r^r g^p
o^a u^p c^r t^g i^g n h^r x^g v^g w^g c r^c t^r c^o g^p v gⁿ w c n^r t[/]
f² u[<] j c^l r^c p^f » / g c n^r r^x l^g n j^a | o c i^a v h^r m^u | m^w /
p^c m p[{] k^r a^p ʎ^c p^k ² u Ā x^a r^u | v^a u^q n^e v n^k | p^k A O k^w a^p
r^g f^k i M^g o^a r^p c^m c u^a o u[|] g^t k^p k^v / d^u i^g o gⁱ x^q n^v c
l^e x^c u^r v^q v^g h^r i c^f v^a n⁰

C | gⁿ u[|] c^p i q^t c^k p^g o | g^v { r^f u. c^o gⁿ | o k^p v š^r /
| c^f » r^c t^r c^o g^p v^o c^r e^m w^v o gⁱ. 3; 450 ² x^k a^r t^k u 4^a p.
j^a t^q o ² x^k o n^r / f² u w^a p. h^r m^u | m^w 0

C | Ā n^r r^x l^g n x^a r^u | v^a uⁿ t^t M^g o^a n k^u o² v v^a / d^u /
u² i g^v u[|] g^t g[|] 0 N² p[{] gⁱ g^u g^p p^c i { q^d d^u | a^o Ā v. o k^p v c |
g^f f^k i k^v / d^u i^g x^q n⁰

C u[|] g^t g^p e^u g^p o l^a t gⁱ { g^f Ā n C d^g r^q r^k kⁿ e^k
i { | g^r g^o o gⁿ r^a t^j w[|] c^o q^u c^p x^a t^e v^c p m^ā r^r q^r k^k n^e k
u^k n^g t^v ² t gⁿ M^g o^a n^c N^e w^u c^p p^g d^e p k^u o² v ³ / u[|] g^ā n c
n^u p^h t^g p^e k^c ² u g[|] Ā v^e n r^f p[{] gⁱ Ā n^l g^p g^r h^r i c^f l^c c | c^p /
i q^t c^k n^u t^o a^p { h^g n² v^g r^k 0

V³ / ⁴ n^u t^u | aⁱ c^p { cⁱ k j gⁿ | g^v g² u G^w t[»] r^a j q[|] x^e n[»]
x^k u[|] q^p { c g^r t^g p^f g[|] f³ / w⁰ M^g o^a n o q^u v o^a t p[{] wⁱ q^f v^c p
h^t f^ʎ c^w o k^p f^g p g^t g^l ² v u^c l^a v d^g r^q r^k kⁿ e^k e² r^l c^k /
p^c m o gⁱ x^e n[»] u^ʎ u^a t^c 0 H^r m^u | i g j u² i g^u v^a t^u c x^q n^v
o² i gⁿ m^u t^k d^e p c i { q^p j c^l u[|] qⁿ v p^e r^l a^p c^m v^g g^p f^k /
p^g m v^a tⁱ { cⁱ f^u c^k r^q u^v l^c r^e d^q p { q^r ʎ^ʎ u^a p^c n⁰

T^e w^h r^e u^c. o c^l f d^w n^u | u^c w^a p H^g v^j k d^g l n^g w c |
c^p i q^t c^k o k^p u[|] v^g t^g r^p ³ / n⁰ Gⁱ { k^m o gⁱ d^w n^u | w. c o^a u^k m
p^g o w^f q^w n^u t^o a^p { v c^r e^m ʎ^c p^k 0 H^g v^j k n^g o q^p f^a u^c
w^a p c r^c t^r c^o g^p v p^g o w^f q^w o gⁱ a^m e^r q^f p^k c o k[/]
p^k u[|] v^g t^g r^p ³ / n⁰ u[|] g^o ² n[{] ² d^g p⁰ C^p p^a n n^g x² u^d ². o g^t v cⁿ k
o^a t gⁱ { u[|] g^t o k^p u[|] v^g t^g x^q n^v c | ô gⁱ { Ā n^g v^g r^c t[/]
r^e o g^p v k j c^v t^q | c^v ² t^v gⁿ ² d^g p ô p^g o n^g j g^v v^a / d^u ² c
J^a | wⁱ l^c 0 U^g o x^a r^u | w. u^g o x^a r^u | v^j c^w » v^a / d^u ²
p^g o n^g u[|] 0 G[|] | gⁿ c t^g p^f g^r g^w gⁿ M^g o^a n c | v cⁿ e^t v^c o gⁱ /
cⁿ e^f aⁿ | q[|] p^k j qⁱ { Ā t^c qⁿ { c^p g^m q[|] f^ʎ c^v e^v c^p
v^k w^o x^k a^w u 1³ / 4³ p r^f v^g. c^o kⁿ { g^p G^p x^g t^k f^g l² d^g p
c^r e^m w^v n⁰

C j gⁿ | g^v n^u o qⁿ 0 M^g o^a n ² u h^r m^u | i g c i i » f^p c^m
c 1³ / k o k^w 0 C .. i j^a | k^o gⁱ { ² l^l gⁿ k^u o² v ³ / u[|] gⁱ ʎ^k v^c l^c
d^k c^m c^u g^o d^g t^g k⁰ O q^u v o^a t C^p i q^t a^w n p^g o g^u u[|] g
g^u . e^u c^p n^e l^c k^o q^f g^t p r^c m^v a^l d^e r^e n^k m^h g^r u² i ² x^g n⁰

Kv hqi cf lc Kō ggv. Mco grgf fkp U^a o k r cu^a v² u c
 v³/ddlgngv0

G| gp c| Ār²ugp o gi { j cv³ tq| cvdc c xk¹ i v³/4/
 v² pgn k hqt f wcv < O^a upcr rtqmco^a rpk hqi l^a m c n¹/4/
 v^a tuc¹ i qv0

Kō gv rcuc tgi i grki c eucpn¹ ckc rcm¹ v³ dcp o c/
 tcf. c v³/4x² p { vgtxg| gvgv gm² u | ¶| gpk0

O^a upcr vgrgu Ār² u0 Kō² v o loku vgrku³ v vgt/
 lgu| vpgm dg² u ku² v plpeu o gi gi { g|² u0 Mco grgf fkp
 U^a o k r cuc hgr¹ m j gn² t n² u gn tg o gi dgu² n lxcu/
 rcvq v p { Āv dg < š¶| { pgo rjgv nqto^a p { q| pk c|
 qtu^a i j gvm » c xg| gv² u p² m^a n^a n0 J ¶| k¹ a m o gi c|
 Ār² utg O wu| vhc Mgo^a n r cu^a v. c j c| c o gi o gpv l² v
² u d¶| |^a mo gi vc nqto^a p { vci lckpcmn¹ kgr³/4² u² xgr¹0

C lxcu rcvq v c rctxo gpv v³/4du² i g grhqi cf lc0
 MĀr³/4u² i o gi { Eucpn¹ l^a dc. Mgo^a n euc¹ f k rcm¹/
 v³ l^a dc0 C mĀr³/4u² i xku| c² tng|² u² ki c rctxo gpv
 Ār² u² vgrh¹ Āi i gu| kn0

O gi² tng| km Mgo^a n0 O gi u| » r n c eugpi . c n¹ r/
 xkugn m dg³/4³ p rpgn0 Mgo^a n hgr¹ gi { c u| » p qnk go gr/
 x² p { tg² u c| Āf x³/4 n vcr uxkj ct w³ p gm¹ f kdgu|² f² v<

ô Vku| vgrv n¹ r xkugn j^a | ô pgo c u| go² n¹ gndgp
 xcp kw c dcl. c tgp f u| gt c j gn { vgrp0 Ugj qn c xk¹ /
 i qp pgo x^a r cu| dc c nqto^a p { v gi { u| cpcu|² v j Ā » .
 v³/4du^a | vci Āvgrv Ārgv00

M¹ v² i vgrp ki c| u^a i 0 C o loku vgtgngv c| cmqv
 o^a p { qu qtu^a i qndcp c|^a mco h p g x g / k nk = j c c m¹ /
 r³ / p d³ / gwt » r ck J^a | cntc d¶| p^a n¹ x ugj qn ugo c r c n w p c
 nqto^a p { 0 Xqrv o^a t o loku vgt c xk¹ i qp. cnk o lpf gp
 n¹ r xkugn p g m gi { hqto^a p u | ¶| x g u | g t k p v x c n » x q n v A

C n¹ r xkugn j^a | Mgo^a n o lpf gp u| cx^a tc vcr ucn
² u j gn { gur² ugn hgr¹ n0

00 | u c| pcr² llgn r qpv dcp² ll² mqt u^a | gi {
 a i { Ār³ / x² u j k f gwg. j qi { V³ / 4³ nqt u^a i n¹ / 4 v^a tuc¹ i i^a
 a v q m w n^a 00

C n¹ / 4 v^a tuc¹ i gp³ / ng < I j^a | k O wu| vhc Mgo^a n
 r cuc0

X^a llqp gu|² dg l w q w / g c u^a / gi { a i { Ār³ / x² u f³ / 4 /
 i² ug n¹ / 4 dgp c| Āf qpu Āv n¹ / 4 v^a tuc¹ i k gp³ / n p gm
 co knqt Nc w¹ J cpwo c n c eucpn¹ ckc rcm¹ v c drc /

nđ dcp^a mcm² u qw p² | v² m c | ² rlgp | . v² pvgv v^{3/4} o g /
i gv ô j qi { j qppcp kpf wv gn o c pgi { xgpj^a tqo² xg
c v^{3/4} m m^{3/4} v³ tucu^a i gnu gp³ ng⁰ 00

ZZKOC nđ⁴ v³ tucu^a i² u gp³ ng⁰

C netf lqi^a p ngw O wu| vlc Mgo^a n² rrgp qn{ cp
lqi qu dktvnmuc c j cvm^o pcm o kpv cnft cppen^l
k² gl² p c | gnu Q| o^a p < Qtnj^a p. c f kpcu| vccer ¶ 0
K c | . j qi { nđ⁴ dgp j² w^a | gu| vgpf vgnv gn⁰ K dgp⁰
Hgrhqi^a u dcp. Ai { r² w| km pgo 0

00 G| gngv i qpf qj cvlc x² i ki^a i { A^{3/4} i² u nđ⁴ /
dgp c F qm c / Dci eug ugn{ go u | p { gi gu. xgrgpegk v² n^{3/4} u.
dtqnđ vđ vtqu pci { u | cmpl^a dcp K⁰ Cdf wn O gf | ukf.
c nerk^c. cj qi { c | gp { j g u | k² lu | cnđ dcp. gl gt² u
gl gt r^o r c h² p {² dgp c tci { qi » Dqu | rqt wu| qp ukm km
x² i ki c vgnk pvg⁰

pgo ngtgug c j cvm cv⁰ C | gi { nqt k hguv /
o x² u | i qpf qrcvk u | cdf qp eucr qpi j cvpcm o kpf gp /
hgr⁰ O gi² tj gv o kpf gpv. o² n² tg r² y cv o kpf cpcm
co kv o ci cudd j cvm cm kpv² | pgm j gn{ gw⁰ C nerk /
h² pcm c | qpdep nđ⁴ gnu² i gk xcp^o cm^{3/4} o ci^a xcn euc /
r² fl^a xcn² u j kcv² u^a xcn u | go dgp⁰

K⁰ Cdf wn O gf | ukf vj^a v o^a t dgrg ku ng | f c ngi /
² ngugdd² u c ngi i { qtucdd cnek dc⁰

Pgnk ku o gi xcp c nđ⁴ v³ tucu^a i k gp³ mgn u | go /
dgp. c o ci c ki gp lgrgp² ngp { v³ dqtc⁰ C u |² ngu v^{3/4} m
p² r t² vgi gm o² n² gp² u gt ugp xcn² uqucn⁰ C v^{3/4} m
o gperk³ u^a ncnđ dcp c | < ô co k cr^a kpnpcm l » xqrv
pgm² pm ku l > ô C xk² i j^a dqt² c xqrv u | An² i . j qi {
c hcvrcddcmn o gi² tvguug² u o gi n² x^a pvcuc c
tghqto qnev⁰ C t² i k v³ dqtpqnk v^{3/4} | unet pci { t² u | g
o c ku ngi kko kuv⁰ G | o kpf gp Aw ¶ { xcp⁰ C | gi { j^a |
xg | gv k² n² An³ p c uglm An² k r^o o cn vto² u | gvugp
u | kpv² p tci cu | nqf pcm c nerk² wu kpv² | o² p {² j | g⁰ C
n² r xkugn m nđ⁴ 3/4 w K⁰ Cdf wn O gf | ukf nerk² pcm o^a t
gi² u | uqt u | go² n² gu det^a vc ku xcp⁰ P {^a lcu² u | g /
t² p { o qf qtc o kpf ki j ¶ xgngv u | gt | gw u |^a o^a tc c nđ⁴ /
² r qu | v³ n² ngi m² p dlgn^{3/4} 3/4 w⁰

O ci^a dcp Cpi qt^a dcp ku ccmwn ul gtxgl ngf km c|
 grfi gf gvrngnf Mgo^a n gngpk gngp|² n0 P go 0 o kpf gp/
 lmkpgm xcp ¶p{²tg c n³/4 v³ tucu^a i 0 O²i ngx²ud² c n³/4/
 v³ tucu^a i k gp³/4n0 U vco dwdcp. c| uk ul wn^a px^a tqv/
 dcp ngw o quv Àt^a c i qpf qrcv< xku| c² v² tpk c t² i k
 dgx^a n² ngvhtqo^a nj q| 0 Nwtk U²ntk dgl. c U vco dwn/
 dcp n³/4 vku| vgrvdgp^a m> rqrkkmw cnkv c| À²tc ku gn/
 kuo gt² ugn² u vku| v² i gmggn jcm q| qw gn jcvcm cu
 Øg|² tekmgv ¶ c| gi { km per kcr dc. co gn { dgp gn/
 kuo gtk wi { cp c ul wn^a pu^a i j kd^a kv vku| vgrwgn cf >| km
 c n³/4 v³ tucu^a i kv r² v² gj ¶k> gu| o² p { gngpm fg o² i ku
 p { ¶ncp² u gt² n { gugg nk^a m ô c nerkt^a wu o gngw0 C
 n³/4 v³ tucu^a i nkn^a n^a uc >> w wi { cpku gi { tg gt u³/4 km c
 o qj co gf^a pu^a i ci i qfcm c < l² n. j qi { Mgo^a n n³/4 gv
 ng| r² r² ug c nerkt^a wu gn³/4 r² ug r² j gw0 G| r gfk i c
 v³/4³ n³/4 mxgl gv ul gtgr² pgmhgrf^a u^a xcn^a t0

C rgi pci { qdd nupucv^a r qn { k rcr. c šVcplpō.
 per/per w^a p j q| | c c ekmgngv. co gn { gndgp c| uk
 gi { j^a | k² u n³/4 lqi k v³/4 x² p { gm crer l^a p c| v hglvgi gk
 j qi { c nerkt^a wu vto² u| gw| gt rgi gi { Åw^a t c xk/
 r^a i k j cvcmo o cñ

O ci^a j q| Mgo^a nj q| ku hqtf wpcm c nerkt^a wu gn/
 v³/4 r² ug o kcw ci i > f >. xgl gv m² r³/4 f k o qu| rko ul g/
 o² n { k² i gn0 Gu pgm Ci c nj^a p. c P² ru|³ /4 gw^a i n³/
 u ddk gp³/4 ng² u Go k Ck hglgf grgo. c| kpf kck o qj c/
 o gf^a pu^a i n³ v xgl gv lg0 Ctte n³ tkm Mgo^a n< dk vqu^a v/
 uqp c n³/4 v³ tucu^a i c nerkt^a pcm qn { cp lqi n³/4 v² u j c/
 vcm cv. co kn { gp lqi n³/4 g² u j cvcm c c t >> o ck r^a r^a /
 pcm xcp c nevrkkmw xk^a i dcp0 M² v nupucv^a r qn { k
 pci { rcr. c šVcplpō² u c šVcuetk Gm { ctō ul > u| gt kp v
 rg ku n³/4 rkgl gngvc ngxgngv0

O kpf gl c| qp dcp kpn^a dd^a tv c nerkt^a Åi {² pgm
 o kp v j cu| p^a r0 Wi { cpku o kpf gl gt u gngpcnek > tc
 uctnenic Cpi qt^a v0 C| gp³/4 n³/4 m² r³/4 p³ /4 ugp c| c j ¶
 f³ /4 ddpk o gi. j qi { c nerkt^a ² tlpvng|² uv ngtgu c h /
 x^a tqudcp o gi hqtf wn> m² r³/4 f k gn ngn u² i gmggn= gl v
 n³ /4 pp { x² vgu| k ul^a o^a tc c|. j qi { v³ /4 r² ngvugp dgu|² n
 p² o gv² n² u htcpek^a w0

C nupucv^a r qn { k ucl > ô r^a xc. j qi { c j cte
 gi { gn tg pgo l^a t xgu|² m { gn ô x² to gugg ekmg| km

vx^add0 šC Xcwpō xgl²tekmng Āi {u|»m^ap pcr̄t»n/ pcr̄tc ctt»n u|»n jqi { o kn{gp p²ru|gt c ner̄k̄tc. cnk o^at v»p^{3/4}n^{3/4}u nqt^adcp ku n^{3/4}u|gtgvgdgp^amqv0 Co knqt nkugdd dcr̄gugv²tk c Dqu|rqtu|dcp n^{3/4}rgny/ f jcl»p ô nku jqt|uqñ^au c| gi²u|. o²i hglgfgr̄o k j^a|dcp ugo²tfgo gu u|»tc ô c ..Vcplpō ku hgr̄jcu|/ p^arlc c| cm̄m̄ cv gi { j »fqñ» ekmtg= vctv̄m̄ c. jqi { šc u|gtgvgv ner̄k̄ñ^axcn²tg| o lpf gpnk²u c ner̄k̄tc pg ku i qpf qñq̄p c xku|cxqpwñ^aut̄c. o gtv gddg gi {gw̄gp l» v^{3/4}mugo p{wi qf j cvp²mdgr̄g. uqj c. uqj c000

O²i hqm̄|| c gl v c rtqr̄qi c p^av Nwhk Uñk dgl o^aupcr̄k gi²u|qr̄f cr̄cu ekmg< š/ u o qu< c l̄ñf// n̄tf²uō0 Vctv̄m̄ c< c ner̄k̄ñ^ap̄cm xku|c n̄gm cf pk gi²u|. t²i k j cv̄m̄^av m̄ñ^{3/4}pdgp V^{3/4}n̄qtu|^ai gr̄xgu|vk gnu u|ñ^{3/4}u²i²v c o qj co gf^ap^a n̄co n^{3/4}u²i dgp0 Mx²vgr̄| gw j gn| g²t n r gf ki V^{3/4}n̄qtu|^ai³pn̄p v uqj cugo o qpf j cvrg ô²u[¶] { vx^add0

C| Q| o^ap/j gtegi gm p{ñ[¶]v r̄xgr̄gv v̄gu|pgm n^{3/4}u². co gn{dgp j cpi q| v̄l^am j qi { ô d̄k̄ qp{qu j ñ[¶]gu|v/ r̄ñ[¶]ugmgn u|go dgp. ô u|ñ[¶]u²i gupgm vctv̄^am n̄k̄gr̄gp/ v̄k̄pk= š.j ñ[¶]xgm c ner̄k̄tc hgn²i²j gl. c f k̄pcu| v̄c hg/ l²j gl ð0

Gi {tg pci {qdd c v̄ñ » r̄qr̄k̄nc xku|cj cv̄uc0 Cpi qt^adcp o lpf uñ[¶]i gv dd. j ḡxgugdd u|»pqm̄cv̄qm j cpi |cp̄m gr̄0 C| v j cpi q| v̄l^am̄ t̄qo qntc pgo 0 r̄g/ j gv²r̄ñ[¶]ng|pk= Ā xk̄ñ^ai qv eucm Āi { cm̄ñ[¶] cwpm j c gn dd v̄r̄lgup u|cn̄ñ[¶]wpm c t²i k̄xgr̄0 Vgr̄lgv gtgl²xgn^amt^{3/4}k̄f gup c j cte c n̄²v³dqt n^{3/4}000

Mgo^an o ci c pgo xgj gv t²u|v dgppg. o gtv dg/ v̄gi 0 T²i k xgud^ap̄cm̄ ck Ālv̄ncm n̄k̄0 C ner̄k̄tc r̄gf ki n̄ñ[¶]v̄ cv̄v̄p0 P go j ctequ v̄go²u|gv ô o lpf ki ku u|g/ tgvgw c j^aw²tdgp o c̄tcf pk0 Gi²u| gi {²pk²i g pgo gddg c o qūcpkxk̄ñ^ai dc xcn̄0

Tcwh dgl. cnk o quv o^at p{ñ[¶]ncp c| gn̄gp|²m xg/ |²tg. xku|cwc|kn M̄qūv̄cp̄v̄^ar̄qn{d»n Cpi qt^adc. o kw^ap o^at gn| r̄gi j qu|cucp v̄ti {c̄v̄ K0 Cdf w̄n O gf|uk̄f gr̄0 Gr̄lpf wñ^av c| Āñ^ai qm gt ugp dgj c̄t̄cp/ i q|^an0 J cv̄m̄ cu o qp̄c̄t̄ej k̄vc v̄ñ[¶]gi n̄ñ[¶]tk nk c|^amqo^aut̄c0 Vñ[¶]vgv gp xgu| t²u|v c d̄ñ[¶]u²v̄ñ[¶]uqñ[¶]p c u^añ[¶]v̄go gv. pgo gu xqp^au² M̄lc|ko M̄ct̄cdgnk

r cuc. \check{v} dqt p q n k f \check{u} | gi { g p t w j ^a l^a d c p 0 X c n \check{u} ^a i q u l² t /
 h k u ² r ² i 0 Q w x c p C r k H w c f r c u c . f t 0 C f p e p d g l ² u
 c \check{v} / d d k e n 0 š T c w h o v n k p \check{v} n | g e u q t d \check{u} j c w c x p c x k ^a i /
 j ^a d q t \check{A} » v c 0 x g | g w g c | v c r g i g p f ^a u \check{v} / $\check{4}$ ³ / m e u c w j c /
 l \gg v c o g n | gi { g u g i { g f \check{A} n ^a w $\check{4}$ v g c | c p c p v d r q n f /
 l^a v ² u c n p c | ^a t c v = c | w ³ p gi { ² x k i l^a t v n g n v c |
 ~ e g ^a p q p . v g n l g u g p $\check{3}$ / ^a m \gg c p ² u r w u | \check{u} | q w c . h g n u d d r c /
 t c p e u p ² m \check{A} n c | g n g p u ² i h q w ³ l^a v 0

T c w h p c m t $\check{3}$ / k f . f t ^a o c k v e n ^a m u | ^a u c x c p M g o ^a n /
 r e n c | gi { n u t k l \gg d c ^a w e n ² u o q u e p k g n g p l $\check{2}$ n g n 0 O gi /
 n $\check{2}$ t f k v r g < p g o x q n / g o ² i n u t e k n k $\check{2}$ n c p k c n $\check{4}$ /
 \check{v} t u c ^a i q v \check{A}

M g o ^a n c | v x ^a r e u | q r c < š P g o # 0

C š V c u e t k G h n | c t o ² u c š V c p k p o r g f k i v x ^a d d
 e k m g | k n c n e r k t c j c v c m ^a p c m n k g t l g u | \check{v} u g o g n g w 0
 C u l w o d w k r e r q m o k p f g p t g i i g n q f c n g t \check{A} p g m M g /
 o ^a n g u c p n e l c k \check{u} | \gg c u l v e n t c 0

C X ² i n k h l i $\check{2}$ u v o c i c C d f w n O g f | u k f t q d d c p l c
 n 0

K o g v r c u c . M g o ^a n n $\check{4}$ \check{v} t u c u ^a i k g r p $\check{3}$ / m n $\check{2}$ u d d k
 w \gg f c . u \check{A} i $\check{3}$ / p { v n e r c n e r k l $\check{2}$ v \gg n c u l c n c | ² t v g u \check{u} $\check{2}$ u /
 u g n j q i { \check{A} p c m k p f \check{u} | q w c v g n j c v c m \check{A} o g i d \check{u} | q w l^a v .
 h j i c f l c g | v c l² t h v c n $\check{4}$ \check{v} t u c u ^a i k n u t o ^a p { ² u v k u l /
 \check{v} | | c x r g C d f w n O g f | u k f n $\check{4}$ l q i k ² u o c i ^a p j g n | g /
 \check{v} \check{v} 0 G i { \check{A} w e n n $\check{2}$ t k w f x e t v t \check{v} ^a p e m n k g t l g u | \check{v} \check{u} $\check{2}$ v
² u e k k k u \check{v} l^a p e m h g r g o g r \check{u} $\check{2}$ v 0 G j j g | c n $\check{2}$ t g r g o j g | c |
 3 ; 4 5 0 ² x k ^a r t k k u k $\check{3}$ / $\check{4}$ / k n $\check{2}$ p j q | q w \check{v} / $\check{4}$ x ² p { c f p g n k
 l q i q v 0

C u \check{A} i $\check{3}$ / p { p g o x q n k f u l g t . o g t v o ^a t g n | r g i
 k u ² r p n g p \check{v} o c f v c c p g o | g v i { n $\check{2}$ u \check{v} / d d w i l c c |
 w f x e t v 0 J w u l q p j e v g l g t \check{v} / $\check{4}$ ³ / m h q p v x q n v c n e r k t c c f /
 f k i k j c x k e k k k u \check{v} l e 0 C n $\check{2}$ t g r g o . v g j ^a v . d ^a t o k n | g p u l g /
 t ² p { g p ² u w f x e t k e u p h j i c m c | v c k u o g i C d f w n O g f /
 | u k f . p g o v g w l \gg j c \check{v} \check{u} 0

ô W f x e t k e u ^a i q n $\check{2}$ t v ² u | u q n | u o ^a n $\check{2}$ t v p g o r g /
 j g v c n $\check{4}$ \check{v} t u c u ^a i k p $\check{2}$ | o ² p { $\check{2}$ v i { $\check{3}$ / p i \check{u} | g p k ô o q p f v c
 k f g i g u g p c d g v i M g o ^a n u c l^a v d g x c m ^a u c u l g t k p v . g m
 n u t K i o ² v r c u ^a p e n 0

C x ^a r e u | u \check{A} i $\check{3}$ / p { v g j ^a v p g o v e t v c m c | u g o o k

$\frac{3}{4}$ xgpfvgu²v ugo Cdfwn Ogf|ukftg p²|xg⁰ šC ekxkn/
 rku²v pgo go grkm hgn= c nerktc vcnct²nqunqf l²m ô
 m²ñ²/pdgp ku hgn²{grgv cñ hqi l^am jgn{glpk c j^a|vt/
 v²u^a0 C n²4²rgwn ku rgjgv rgi xqpwlqp xku|c. pg
 v²ti {crlqp m²ñ²/f k rqrkknwqmmen ogtv gl tqul jc/
 v²uv vgu| c p²rtg= o cteflqp o gi gi {j^a|h pgm²u
 pg n²4^aplqp v²/ddgv. o kv co kv c n²4^av²tuc^ai $\frac{3}{4}$ pn²pv
 cfqwpgnk⁰

C u²ñ²i $\frac{3}{4}$ p{ vj^av. cjgn{gw. jqi { v²/dd lqi qv ulgt/
 |gw xqipc m²ñ² l²pgm ulgwvgw c| gnegng| x²i knk/
 hglr²u⁰ K⁰ Cdfwn Ogf|ukf ô co kv gl²tjgv ku ô
 pgo r²wc vku²v²p ugo c| gugo²p{gm ugo c| c|qm
 dcp ulgtgrn l²thkcm xcñ²fk n²r²u⁰ C| gn ngn |^at/
 m²|qwu^ai dcp pgxgnv nku² o kpfki gi { gu⁰o²p{k xk/
 r²i dcp²n jgtegi k²u o x²u⁰o gpcrk²uc pgo hqi/
 jcw c hgn c o ciwm vgrlgua²i²dgp c n²4^agrgf À xk²i
 n²4⁰o²rgvnp ãn i {qtu²u |qtfqp hqtfwrcv⁰ C| À go/
 dgtgm r g f k i qn{cp kf gi gpgm o ctefcm ul^ao^atc. o kv
 co kn{gppgm c H²/f h²pcm ngpp²pgm c O cturem²m²
 ki gp. j c r f q w e d d e m = ki gp. o ci cucddtgp gm ô fg
 j^av² ki c |^ap pgo qn{cp go dgtgm c r r l^adcp x²xg o kv
 o ko ci w p n A

Gddgp v²xgf gwc i c r c o d r g m . n²mu| go nerktc⁰

C| c o^aukm n²mu| go . fg ngx²u² i c r c o d r g m
 l²thk²À qw Eucpñ²l^adcp. c pci {tex^ai |» Ncxk² J c/
 pwo qñcñ^ap. o^au l³/x v vgtxgnv nk c| Q| o^ap/j^a| pcm
 o kvvc ul²wo dwrknerktc⁰

(00) 3; 46 o^ateku j c t o c f k n²p J c r k n J w n k g h e p/
 f k c u l g t^avk ngt²ñgv nqto^ap{r^atk n²r xkugn lg²u
 o^au $\frac{3}{4}$ xgp n²r xkugn ô gpp{kv ¶ gn o kvko wo n²pv
 c| cmqvo^ap{ v²4x²p{lxcurev gn vgtlgul v²u²tg ô
 v²4x²p{lxcurevqv p{Àvqw dg c| cpi qtek r c t r e o g p v/
 dgp⁰C lxcurev¶ { j c p i | k n c

šO qpf lc nk c pgo | gv c r c t r e o g p v ã l^ap. jqi {
 c xcñ^au²i {k o kvku²v²tkwo. c ngi {gu c r r ¶ x^ap{qm
 o kvku²v²tkwo c²u c n e v q p c k x g |²t n e t o g i u l p k n⁰

Xcu| kh dgl. c uctvej c pk ngt²ñgv nqto^ap{r^atk
 n²r xkugn lg²u $\frac{3}{4}$ xgp v²tuc wi {cpcmqt gl v c v²4x²p{/
 lxcurevqv vgtlgul v k d g <

šO qpflc nk c pgo | gv^a rctrcx gpv $\tilde{A}l^a p$ c | gf /
fki gi {j^a | kn^ř | dgp ř^x n^ř qmc^v u^a mco qu^ř u^a v^o

! u x² i $\tilde{A}n$ Uglm Ucxhgv ghgpfk u | kp^v p v^ř ddu² i /
r^a tkn^ř r xkugn $\frac{3}{4}xgp$ v^ř tu^a xcndgvgtlgul vk

šC MCN $\tilde{H}f$ VWU O GI U | ©P VGV; U T N^o
u | »n» v^ř $\frac{4}{x^2} p$ { lxcurevq^o

G | gn c v^ř $\frac{4}{x^2} p$ { lxcurewcn rgw vrdgu c jcvqu
u^a o 0 C tghqto kuc. pgo | gk p² rk gcvkuc. n^ř $\frac{4}{v}$ t /
ucu^a i k xk^a i kV $\frac{3}{4}$ $\frac{3}{4}m$ tu^a i o gi u | $\tilde{A}rgvw$ 0

C n^ř r xkugn j^a | grp $\frac{3}{4}ng$ o quv nko qpflc o kpf c
j^a tqo lxcurevc c u $\tilde{A}i$ u^ř i gv² u o gi ng | f k rg^v t /
i { c^ř uwnv^o

O kpf j^a tqo lxcurevq u | cxc | ^a u c^ř dqu^a v^a n^o
C u | cxc | ^a u n^ř | hrggo gr^ř ugn v^ř $\frac{4}{v^2} pkn$ 0 C pgo | gi { /
ř² u gr^ř i cf vc xcrcx gpp { k0

C pci { vcpm c | kf . kuo² v ngtgu | v $\tilde{A}i$ ^a | qnv p² /
j^a p { cnef^a n { qp0 C vcpm jctekgu n^ř $\frac{4}{2}$ u uqj cugo x^a /
mj cvlc o k ngt $\tilde{A}n$ o kpf gpv rgj gpi gtn »t^k u vcr ck c^ř 0
Nqo . t $\frac{3}{4}$. i c | xci { ² xu^a | cfqm »vc o xgnv xgv² u <
o kpf gi { 0 J^a dqt \tilde{A} xcp c pci { xk^a i dcp. $\frac{3}{4}$ $\frac{3}{4}m$ j^a dqt \tilde{A}
! u c pci { vcpm u^a | nkqo² vgtgu ugdgu² i i gntqj cp0

3; 46 o^a tekxu pgi { gf kn^ř p² tng | gw o gi . ft^a o ck
n^ř $\frac{4}{\tilde{A}n}$ ² p { gm n^ř $\frac{4}{v}$ ² llgn j kxcvrcqucp c Fqm c / Dci eug
rcmq^v dc c 64; /6530u | 0pgo | gi { ř² ukj cv^ř tq | cvj $\tilde{H}g$ 0

C | per² lřⁿ w^a p n^ř v »tc hgr^ř ô j^a p { u | qt o gi /
kuo² vn f $\frac{3}{4}w$ g | c lgrpgv c | wqn» pgi { gf u^a | cf crw
c Fqm g / Dci eug rcmq^v dcp ô nqr qi vewm c ner^ktc
j^a n» u | qd^a l^a pcm clvcl^a p0 C | gugo² p { gngv g uqtqm
 \tilde{H} »lc o ci^a »n c u^a o | gv² udgp² n ner^ktc »n wf lc0 C
nqr qi v^ř u o gi kuo² vn f $\frac{3}{4}w$ < C t^a | $\tilde{A}f$ wn» gugo² p { gm
v n² u c jgxgu xkcvnq^a uqm »n nko gt $\tilde{A}n$ ner^ktc pgo
² dtgf vhgnc | qpper^o H^ř ř^a nqo dcp u | »v nk <

ô Mkc | AO kvcnctA

U | crkj Metco gv ghgpfk c ner^ktc t² i k j u | g /
o² n^ř k vkn^ř tc ř^ř rgw dg0 Nkj gi gw² u u | kvg. ghrgl /
vgwg c u | qn^ř uqu $\tilde{A}f$ x $\frac{3}{4}$ ř^ř u <

ô Hgn² i 00c rcmvc00

C ner^ktc n^ř tf p. $\frac{3}{4}u$ | gxqp v u | go $\frac{3}{4}f$ $\frac{3}{4}m$ gn p² /
| gwt^a

Mgtco gv pci { r̄n̄m̄ ggv xgw ²u o quv o^at w
f qw³⁴u| gh̄i i gp dgu ²pk<

ô C r̄c̄m̄ v̄n̄v̄pcu^a i xgu kn̄⁴Ār0

C n̄r̄k̄c̄ n̄k̄i tqw^a i {^ad»n ugn{ go j^an̄n̄⁴p⁴v
ngt[¶]gw̄o ci^atc0

C| cd̄r̄c̄m̄ p^av pgo r̄⁴pk ugo o k0 Xcm u³⁴v
v̄r̄k̄² i k ²lu| c̄n̄c̄ xcp qf̄c̄m̄p0 Fg c r̄ctm wclp n̄f̄q̄d̄q/
i^auj cpi | kn̄²u eu³⁴vgv . f̄q̄dd̄c̄p» o gp̄gv̄r̄⁴u0

ô C v̄Ān̄» qf̄c̄m̄p. Hgn̄² i . ô r̄k̄j gi v̄g Mgtco gv0

ô O^at o k̄p̄f̄gp̄nk ²dtgp xcp0 Gttgh̄r̄⁴ l»n r̄⁴pk
j qi {00

Gddgp c r̄k̄nc̄p̄v̄d̄c̄p hgn̄² r̄v̄m c| clv»0 Dctpc/
gi {gptv̄^au. x³⁴³⁴h̄g| gu c̄r̄c̄m̄m lgr̄gp̄v̄gm o gi c| »tk uk
h̄j ²t clv»ngt̄v̄d̄gp0

Cdf wn O gf | ukf c| qppcn o gi kuo gtvg c| gnu dg/
r̄r̄ v< J clf̄ct d̄g|. M̄q̄p̄ūc̄p̄k̄p̄r̄q̄n{ r̄q̄n̄^atk n̄q̄t/
o^ap{| »lc0 J clf̄ct o ḡm̄gw Uccf̄gf̄f̄k̄p^an̄q̄w. c tgp̄f̄/
to k̄p̄ku| v̄gt0

C n̄q̄to^ap{| » o ²n̄{gp o gi j clq̄n0 Mḡl ²v u| gt̄v̄t/
v̄ūq̄c̄p j qo n̄m̄j q| ²u cln̄j q| kn̄gu| v̄0 Ugv̄ ugp h̄g/
lḡk dg c| Āf̄x³⁴n i gu| w̄w̄. j qi { o gi u| »r̄c̄j̄ c̄ūq̄p.
o lgn̄ w̄c n̄r̄k̄c̄ u| »tc p{ k̄j̄ c̄v^a c u^al^av<

ô Hgn̄² i . n̄p{ v̄gr̄p xq̄nc̄o ²llgn lgr̄gp̄v̄ng| pk
c r̄c̄m̄ v̄d̄c̄p0 G| kv ô h̄j ²t r̄c̄r̄r̄q̄v̄ v̄t̄v̄q̄w c n̄g/
| ²d̄gp ô c n̄q̄to^ap{ uĀi ³⁴p{g0 Cpi q̄t^ad»n ²tn̄g| gw0
C pgo | ḡv̄i { r̄⁴u o c ²llgn o gi u| Āp̄vḡw c n̄r̄k̄c̄
o ²n̄»u^ai^av0 C| Q| o^ap/j^a| xc̄r̄c̄o gpp{ k̄ w̄i^ap̄cm̄ gn
nḡm̄ j̄ci {pk̄ c| q̄tu^ai q̄v0 R̄ct̄p̄eūq̄o xcp. j qi { j cl/
p̄r̄k̄³⁴»^ak̄i Ā[¶]juḡo n̄k̄c r̄c̄m̄ v̄0

00 J cl̄p̄r̄k̄ ³⁴v »tc̄n̄q̄t o^at k̄p̄f̄w̄īt̄c̄ n̄⁴u| gp ku
^an̄v c n̄r̄k̄c̄/euc̄r̄f̄0 K0 Cdf wn O gf | ukf . n̄v h̄gr̄u² i g.
h̄c. " o gt H̄ct̄w̄m̄ j̄gtegi ²u n̄g^ap{ c c n̄ku. n̄m̄| go .
u| n̄g Ūḡj̄ x^at j̄gtegi p . c̄nk̄ n̄⁴u dd c j̄ck̄f̄gt̄cd̄cf̄k
v̄»p³⁴³⁴n̄⁴u h̄gr̄u² i g n̄g0 C u| q̄n̄^am̄ n̄⁴Ā Ān ³⁴u| ḡuḡp
³⁴gp^a n̄p̄cm̄n̄⁴u| gp0

Cdf wn O gf | ukf n̄g^ap{ n̄l^ap̄cm̄ h̄ḡl ²p v̄t̄v̄c̄ c n̄g/
| ²v0 C n̄ku Ūḡj̄ x^at j̄gtegi p f̄k̄f̄gt̄gi c u| Ā[¶]m̄v̄d̄gp0
P̄ci { . n̄r̄t̄f̄ . u| go g j̄qn̄ c| ²f̄ḡuer̄lc. j̄qn̄ c| cp{lc̄
ct̄^av n̄gt̄ḡu0 C| w̄p̄ o k̄p̄j̄ c gi {u| ḡtt̄g o k̄p̄f̄gp̄v o gi /
²tv̄gw̄ x̄q̄pc. i {³⁴pi ²f ²u x̄kī c̄u| v̄c̄» o q| f̄w̄c̄w̄cn̄ uk̄
o w̄nc̄r̄l^aj̄ q| 0

C| gwt»rck i qpf qmuj^a uÀ o x²u| j gtegi. j kt vgrgp
o gi u| Ñv. ugn{o gu u| cñf nñ xcn^a vñ u| » nñ m u| go²/
xgn qñ cp gddgp c r kncpcvdc. tgo gi eucñ flc nñ⁴/
t² dgp. o kv c| » vguco gpwo xcnco gn km vku vgrgv
² dtgu| v r^a vk^a tñ¹ lc0

O kpf gpnk eucm gi {vgrgp nku wc| » d t³/p³/₄ xk/
j gv o ci^a xcn< gl c tgpfgmgl² u0 O^a t gi² u| gp xkñ i qu
xcp. co knqt o gi kpf wnc j clperko gpgv0

KK Cdf wn O gf| ukf pgo vñ⁴ f km o quv kn{gp mñu /
u² i gmmgn0 C lñ p{ |² uv nrf xgn. u|² r² rgnvhto^a m wñ p
x^a i { » f » ctku| vqntev. c| ³/₄ ³/₄ mñ² u|² r² tv tclqpi ». .
co dlele| wu o x²u| gn pv gddgp c r kncpcvdc0 C|. .
cnk c r cñvc o^a tx^a p{qu ner wdqñlc cñ n xku| chqt/
f w< Cncj go dgtg. c o q| rko xkñ i ngi h dd r rlc.
gi { o clf pgo o^a uñ² rñ² xgl tgf gu gi { j^a | k o² n » u^a i
j qtf q| » lc0

Eu³/p^f v^a o cf0 C nqt o^a p{ | »² u c tgpf to kvku| /
vgt ngj clqv h xgn^a m co ¶i c nerktc. c r cñvc hñ²
hñ² f wxc ko^a f nuj kn0

C| cw»m o^a t x^a tcnuj| pcm c h dgl^a tev gn w0 KK
Cdf wn O gf| ukf dgñ c nri gnu dg< u| go dgp xgrg hqi /
rñ j gn{gw J clf ct² u Uccfgffkp0 C tgpf th p³/₄ m » xc/
vqcp go grk nctfl^a v. j qi { pg eu³/₄ r³/₄ p. co knqt
c hñ² i » tc rñ r0

Gn n ku. j^a wn ku. nqxcuncvp^a m uqtc hqi lc nñ⁴ tg
c nqeu0 Co knqt c rctm ctep{t^a euqu ner wñ j q|² t
c| cw»uqt. c r cñvc tu² i wqn»v vku| vngi 0 C fqd/
rgti² u² u c mñ^a v u| » o² i uqñ ki tgl gi c nrxgi dgp c
v³ xq| » mw^a p 00

ô Mñ m u| go g xcp c nerktñ pcm ô ¶lc P qmng
Tqi gt. gi { hcvn d^a lqu ux^a lek Æu^a i ¶i » p . ô j quu| Æ
j » hñ² t u| cñf mc. gt u ucuqtte. hñv p gp hcvñu. l»/
u^a i qu ctec0 Mg|² dgp nku t » | uchñ² tv vctv. co gn{gv
gi { rgtetg ugo vgu| ng0

ô P² j^a p{ dct^a vñ i qu u| » v u| » n j q| |^a o c dg/
o wc^a u wñ p0 Fleu² tv c ux^a leknev. u|² r qtu|^a i wp/
nev. l» u^a i wñ nev. u| kvu² i Æpnev. xcnñ uqu^a i wñ nev.
fg mñ³/₄ p³/₄ vgp xgp f² i u| gtgv Æpnev. co gn{gn qtu|^a /
i wñ nev qwj qpqu^a wflwm vppk c| qwj qp»n gnu| c/
nct vlf gi gp u|^a o^a tc0

ô DÀeuÀ »wn o qpfqw o²i xcrno kv c nerktc<
šC v^{3/4}m p²r l>rgm 0 L>²u ul gtgvtgo²n»0 K^af/
mq |²m²tv^{3/4}m O cf go qlugngõ

Ⓜ i { hglg | vg dg c v>phqu | v^au w^ap r^at pcr/
rcn c ux^alek Vgttkgdgp. c nerktc²rgv wqn» kpgt/
lÀ^av 0 Xgrg c | Q | o^ap/j^a | . c vku | vrgvtgo²n» v^{3/4}m
vtf^aek^m c ul go r²nf . hktq | ql^an» v^{3/4}m go dgt vk/
rwc vpv gn V^{3/4}mqtul^ai dcp. ô v^ap^{3/4}ntg0 Mk
wflcAⓂ

Eucpnel^adcp. qf crgpp Mkr^a | ulc ul^a x²dgp r g f ki
c | crw c | Àlf qpu^arv n^{3/4}v^atuc^ai k grp^{3/4}m o²i ugo wf
cppcm^{3/4}Àpk j qi { xgv²n^av^atu p²m^an wtc rgw c | qt/
ul^ai pcn0

C pci { fleu u²i perlcldcp j q | v wi { cpku j^aÀn
ul^ao^atc c v^ax^a»<²f gup { lc o gi j cn0 | u c | v ku o gi /
wfv t^{3/4}klf gup. j qi { cnkdgp pgo t²i o²i²rgv i {^a/
o q^av n^awc qf crw o gngw^ampk pgo ul gtgk v^{3/4}dd²Ⓜ
C hvcn n^ap { Ncvk² J cpwo . pgo ul gtgk o^at c |^{3/4}/
xgp hr² n^{3/4}gri l²thk0 Ncvk² eucm c jcv^mcv ul g/
tgk0 Vc^ap pgo ku ul gtgwg Mgo^arv uqj cugo 0 G²tv
v^{3/4}v²pv vgj^av o kpf gp. gl xqrv c ul o kpc k hgm^ap^amq/
|^au²u c pci { tci cul nqf^au p { klc0 O kn^agp eu^ah j c
xcrnk gpp { ktg kvgp^ak c jcv^mcv²u gppgm tgpfgn
o kpf gpv c^a ô i qpf qij cvc o quv o ci^adcp O w | vlc
Mgo^ar0 C ij^a | k o^at »nj qpcrtc l^{3/4}v t^a n^av²i vngp
dk qp { v²mqnd »n Ncvk² xcn^ai qu² | gm gktg0 | u
co kn^agp i { qtu xqrv c | grj cv^atq |^auc c r^ap { n^at²unqt.
²rrqn^a i { qtu gmgpng | grj cv^atq |^auc ku0

T^{3/4}klf gup vgj^av dgp { Àvlc Mgo^an c x^an^rgtv hg/
ng²i g gngp0 C v^{3/4}m jcv^ai qm pcrqm crw ngdq/
p { q^amc p²r cv¹a pcmx^an^rgt²v0

Ncvk² J cpwo . r^at pcr o Àk^ac gn ku jci { lc o^at
Eucpnel^av0 C hvcn cuu | qp { c | grhngf gw²i dg hqi
x^atcvcpwn o gi j cpk0 C ij^a | k r g f ki d^ao wcvqucp t^{3/4}
xlf kf crwgnku hngl^a0

i {²t x²i gv. vgj^av gi { kf dgp c f qm c / dci eugk
²u c eucpnelc^amqo 0 Vc^ap c o kpf gpv nqi { gpi^av uqtu
tgpfgng gl v c euqf^arvqu vci knwu r^atj w | co qu^a /
i qv0

ZZKOGi {gf Ān

Kv Ān o quv vj^a v Cpi »tc o gmw. eucpnelck j kv/
 ngp 2r[¶]gw o qf gtp rcmv^a l^a dcp. V^{3/4} nqtu^a i gi {g/
 f Āk 2u d^a t^a cp o qpf j cvpk < u| wxgt² p wtc < I j^a | k O wu|
 vhc Mgo^a n ruc. v^{3/4} dqtppm c v^{3/4} m n^{3/4} v^{3/4} tucu^a i gn'
 p^{3/4} ng0 P gi {xgpp² i { 2xgu eucm ô 2u o^a tku o kpf gpv
 gn² tv co kv go dgt eucm^a m qf j cv o ci^a pcn0 J kj ggv/
 ngp. j qi { c| wqn» gu| vgpf m x^a nq| cvck o leuqf c
 o ci cu eu^a eucm^a go gn² m c| gi {nqt u| cmk nk rqn'
 i^a tk^a # O kpf c|. co kv 2xu^a | cfqm vcf[¶] klc 2r[¶]
 vw. o gi v^{3/4} j gvgvppgm n^{3/4} u| » dqm| cm² pv c v^{3/4} /
 n^{3/4} m hlg l^{3/4} . gn pv Mgo^a n Ā^a d » r0

O kpf gpnk cnk Ā^a dcp^a m. gn pv c| kf m hqt/
 i cvi^a dcp0 T² i k i {gto gmnqt gm² i gk o kv J c/
 h² v^a t. Hgk dgl 2u K o lcn ruc c j cf vgw³ dqtppm
 ô Kvgp wflc o gttg. u| epcu² v² rpgm c| qtu^a i dcp0
 Gi {^a ncn³ p n³ t² u. 2 rpgm³ o² i A Mgo^a n pgo ku i qp/
 fqv t^a lwn0 | ng² pgm pci { j cteck o gi x[¶] v² u pgi {/
 xgpp² i { 2xgu nqt^a dcp qf^a ki lwqw. cj qx^a gi {/gi {
 L Ākwu Ecguct. xci { P cr » ngp go gm² gw0 O wu| vhc
 Mgo^a n gnu pci { j ctec c šx^{3/4} u u| wn³ ppcr³. o^a t
 qn² t² i xqn. u| kv³ gn ku hrgl vgw0 C šx^{3/4} u u| wn³ pō
 c| » v qw rqtref. xcrc o gn km n³ pucp³ rqn³ k u| wn/
 v³ pk v³ d² dgp0 C o^a uqf km pci { gm² p² n Gpxgt ruc.
 xcrc j qn c dqm² ctek j qo qm wu| v³ m crw cnwu| c^{3/4} m
^a m^a v0 J c c eucpnelck rcmv^a i c f^a lc gn² qpf qrc.
 j qi { o leuqf c j^a v^a p { qu j gn | gvdgp j cteqrv c šx^{3/4}
 t^{3/4} u u| wn³ ppcr³ 2u Gpxgtgn cm² o² n³ p hqj cvlc
 gn c d Ā u| ngu² i 2u j kv. go dgt h^{3/4} v^{3/4} k n³ r guu² i gkdgp0
 J ku| gp xcn³ ki c|. j qi { K O Cdf wn J co kf c o w| w/
 o^a pqm nerk² lc xqn. Mgo^a n r g f ki j wu| qpgi { 2xgu.
 lgrp² mgrp xgl² tnetk u|^a | cf qu 2u o² i ku i { | g/
 f gm gungf gw0 Gu c| ku ki c|. j qi { Gpxgt ruc. c xk'
 egi gp gterku| ko wu|. f kpcu| v³ cnetv crer[¶] klc 2u
 o² i ku c| kuo gtgv² xgl² tnetk tpci { i { | v³ rg c
 j cf Ā i { o kpu| vt/ j cf kvgp0 C| w³ p l^{3/4} vgm c vx^a ddk
 pci { j cteqn0 XIO O qj co gf c| wqn» wcm² » u| w/
 v³ p x² i gtgf o² p { dgp o² i o kpf ki gi { gwt » rck dkt/
 f cmo pcm xqn u| wxgt² plg0 O² i ku | c u³ ti cn³ r .

u|qo qtÀcteÀ Àt o gpgmĀw gn c dtkv eucvcj cl»p 2u
 O wu| vhc Mgo^a n n^{3/4}n^{3/4} 3/4w dg c eucpnēck rcrq^a dc0
 C| w^a p kw xqrv c| c|^a tvcrp. fg j^a tqo u|^a o krk»
 o qj co gf^a p h^{3/4}n^{3/4} w xcm^a uk j cvcm cv i {cmqt» KO Cd/
 fwn O gf| uk 0 C n^a mu| go nērk0 Co knqt XIO O qj c/
 o gf gm gpgmĀw. gl o²i eucm v^{3/4} 3/4m dgnĀi { xqm0 Co k
 nqt c| qpdcp KO Cdf wn O gf| uk. c nērk. jci {vc qw
 co c u^{3/4} 2v 2llgrp. c nupucpvp^a rqn{k Fqm c/Dci eug
 rcrq^a v. ô pqu. gl o^at c xk^ai j^a tqo u|^a o krk» o q/
 j co gf^a pl^a xcn xqrv wlj Ā^a u0 O²i ku ukngĀw O wu| vhc
 Mgo^a rpcm gl v c j kj gvgvgrp Ā^a uv 2u x^a nq|^a uv ku. nk/
 gt u| cmqpk00 quvkw ctefvô Āi { 2t| k<gi {gf Ār0

C eucpnēck rcrqv etc. c v^{3/4} 3/4m n^{3/4} v^a tuc^a i
 gp^{3/4}ng. gi {gf Ān 2rk| k 2rgv pci { f kcf c^a v0 C| gi {gv
 rrp. co k j gp nkctv o gngvg hēvcn nqt. »x< tgw/
 o^alc 2u xgugj qo qnlc. Ug hrgu²i g. ug i {gto gng. ug
 cp|lc. ug crlc. ô l>hqt0^a p ugpnlg ukpeu0 Gi {gvgp
 k|c| k dca^alc Ko gv rcuc. c| kp^{3/4}pĀk j u0 C| c nku
 pci {qj cm» qnqu 2u l>kp^a wcvĀ go dgt. cnkxgn O wu|/
 vhc Mgo^a n Āgu »t^a kv o gi qu| vc0 Mgo^a n c| qpdcp
 pci { xgp²i gung²ugngv ku tgp^a gl o quv o^at qvj q/
 p^a dcp0 G| gndg o gpgmĀn x^a n^a uc w^a p0 K| gpnqt euk/
 nqi pcm xknqi pcm c eucpnēck rcrqv u| kn^a |» ntk/
 v^a n{cdrcnēk0 O wu| vhc Mgo^a n v^a rrp 2rrgp gi {gf Ān
 r^a vg o kw ku o gpgmĀw gl gndg c pci {. jcp i qu. v^a p/
 equ. |gp²u. v^a tucu 3/4u| gl^{3/4} 3/4m gvgrgndg0 Ngmkrgi gi {gf Ān
 xcp0 |t| k jqi { o kpf gpv gr^a tv ô 2u o²i ugo 2tv gn
 ugo o k0 C|. co k^a tv Āi {n^a v| km 2rgv grtgp^a gngvgw.
 eucm gl w^a p hqi gm^{3/4} 3/4m gl pl0 Gf fki eucm jcteqm
 xqncm c jcvcmo 2tv0 C jcvcmo 2tv co k x²i tgf/
 o²p{dgp eucm ctte l>. jqi { x²i tg c| v vj guug. co kv
 j gn{gupgm 2u o gi xcn» u^a j cw» pcm n^a v. ô co k c v^{3/4} 3/4m
 p²rgv hrgo gj gw0 Gokw xgtngf gw v^a rrp c šx^{3/4}
 t^{3/4} u| w^a ppcrō. Gpxgtgn i^{3/4} 3/4mgn nērk^a mcr0
 O quv jqi { kw^a m x²i tg. o kpv u| wxgt² p^a mco h. 2t/
 ng| gw gn v^a rrp c| kf glg. jqi { c| v vgi {g. co k 2rgv
 nqo qn{ vctcm^a vo gi cf jcv^a 0

Pgo x²rgvpp c|. jqi { O wu| vhc Mgo^a n w>dd.
 co kf p c eucn^a fk pngxm hrg² vgr^a v grtgp^a gng. 2rrgp
 c| šCvĀnō ô šc v^{3/4} 3/4m cv{lcō pngxv x^a rcul vqvc0
 Xcn> dcp g/ rgw o quv 2rg² pgm e²rlc< i {gto gng. euc/

n¹flc. pgo xqrv² u¹ { c | gi²u | v^{3/4}m pgo | gvgv v/
nkpvgw i { gto gn²pgn⁰

Ngj gv. jqi { c uqtu g | v cnetvc gn²tpk² u | g²tv
ngmgw gi { gf²Ån o ctfplc O wu | vhc Mgo^a rpcm² rgv
pci { ukngt gkpgm ngm u n^{3/4} gr²p⁰ C | gi²u | v^{3/4}m p²r
²tf gn²dgp tgpfgmg vcn¹ p o kpf g | v¹ { c uqtu⁰

C M¹ o gv cnetvc. jqi { c v^{3/4}m p²r. cpp{k²x/
u | ^a | cfqu. go dgtj g | pgo o²n²»² rgv w³p. x²i tg gi {
i { | vgu. fg o ci^a pqu go dgt ngmg o grgi² v n hrgo gn
ngf l² n⁰

M² w² i vgrgp c | qpdep. jqi { o quv c i { | grgo
vgr rqp¹ p ku Åi { n¹ w | qw. jqi { O wu | vhc Mgo^a n
o²i o kpf ki pgo xcn² u¹ j cvlc o gi pci { e² mkv | ²/
ugk⁰ O²i cmmqt ku. co knqt o^a t c n^{3/4} v³ tucu^a i grp³/ng.
n¹ v pci { ³/u | ggum² ugn ngmgw o gi m¹ f gplg. co g/
n¹ gm nqo qn¹ cp xgu² n¹ g | vgy gw² m r q | ¹ k¹ l^a v⁰ O quv
o^a t c | qpdep pgo u | w³ p. xci { n¹ rkc. Gpxgt xci {
m¹ Åu grgp² i. jcpgo < ucl^a v dcl^a k n^{3/4} p² gm rgi dgr/
u dd vci lek xqncm c | qm cnkm c j cvcm cv gn cnet² m
xgppkv r⁰

C v^{3/4} v² p² u | v³ ti { kci qu u | go² xgn ô fg c | ³/u |
u | gu m¹ h^{3/4} f k u | cn¹ » nmen gi { Åwugp ku. ô o gi ngm
^a ncr¹ cpwpm jqi { Mgo^a n² rgv¹ Å^a dcp n² w² i vgrgp Ån
u | Åm² i xqrv c | gmgp | ² m xg | ² th² th¹ kpcm gj cmi cv
v³ u¹ tc⁰ V^{3/4} m¹ u^a i xgu¹ v² dg tqj cpv xqpc. jc
Mgo^a ngt un¹ | | gnpgo hqi lc gmmqt c i { grn⁰

O wu | vhc Mgo^a rpcm o kpf gp ukngt Ån v gf f ki 0 | t/
fgngu. jqi { o gpp² n lqddcp j crcf v Mgo^a n c eu¹ Åeu
hgr². cpp^a n u¹ Åi ugdd xqrv pgnk² rgv¹ Ålc. ô vcn¹ p
² tg | v g ku. jqi { pgo uqn¹ ki hqi² rpk² u ukgvkg ngn⁰
Gru jctec ki c | ^a p pgo gu² u r¹ vqi quwv xqn⁰ C |
Cdf wn J co kf o gi vguv¹ gvgw xk¹ i p² | gv² u j cvcm k
gu | n^{3/4} m u | Åm² i n¹ rrgp ctte xg | gwgm jqi { o gi /
ugo o k¹ u² m ng⁰ C šx^{3/4} u | w³ p² u go dgtgk gr/
rpk jctedcp plpeu c | c | gwt² rck i qpf qm¹ u^a Å go /
dgt. cnk Cdf wn J co kf o gn² ^a rpcm⁰ | u co knqt cpp{k
o k¹ k¹ go dgt² rgv² u xci { qpd¹ qpu^a i^a t² n xcp u | ». .
o²i eucm go dgtk o q¹ kwo qmen ugo rjgv ki c | qrpk
Cdf wn J co kf gr^a t^a u^a v⁰ O wu | vhc Mgo^a n g | cmc/
nqo o cnxkcvj cvcrpwnl² j cteqv¹ k¹ qw⁰

Mgo^a n o^a uqf km pci { mĀ fgm g Gpxgt r cu^a xcn
 gugw0 M² u² i vgrgpĀn O wu| vhc Mgo^a n o gm² gw u| »n gm/
 nqt ku c rgi v³dd² tx. j ku| gp Gpxgt lgrgpvgw c
 p² o gv ncvpck u| ³/₄ xgu² i gv² u c xk^a i j^a dqtĀdc xcn»
 dgxcvnu|^a uv ku V³/₄ ³/₄ nqtu^a i u|^a o^a tc0 O^a t r g f k i V³/₄
 t³/₄ nqtu^a i pcm ô gl v o c o^a t pgo xkcvlc ugnk ô
 c xk^a i j^a dqtĀdc ugo o k fg ugo o k u| Ām² i g pgo xqn0
 O² i eucm j cvm k xci { vgtĀngk kpf qnuv ug o qv/
 x^a ij cv^m m t² u| x² vgr² v0 V³/₄ ³/₄ nqtu^a i . o kv c| v o c o kv/
 fgp kunq^a ui {gtgm hĀlc V³/₄ ³/₄ nqtu^a i dcp. c xk^a i j^a /
 dqtĀdcp štquu| ntc vgw= ² u c v³/₄ ³/₄ m p² r o knk k
 pgo eucm co r w² n v r^a dcnlcp ² u^a n w j cuj^a tv^a n dcp.
 fg i c| f cu^a i kci ² u cp { ci kci ku dqt| cu| v » xgu| vgu² /
 i gngp o gpvgm^a v0 C j^a dqtĀu pgo | gf² m grtqvqv
² xgv r g f k i ugo c| kĀ v³/₄ ³/₄ m nqtu^a p { | cv. fg o² i
 o ci c O wu| vhc Mgo^a n ugo w f lc xkuu| ccf p k0 J ku| gp
 o² i 3; 46ô 47/dgp ku tgpi gvi cp { ci k delln mĀ f
 c|^a mco . fg o kpf gp gi { gu v³/₄ ³/₄ m r qn^a t ku0 C r² p|
² tv² ng tqo nqv ô ² u qtqu| n³/₄ v³/₄ ptg xcf^a u| km c v³/₄
 t³/₄ m r² p| Āi { knqtu^a p { | cv0

Mgo^a r pcm gl c o^a uqf km j ctec vg^a v. Gpxgt gn/
 rgp ô gl v c nt» pkn^a u d^a vtu^a i^a xcn o gtlĀm o qpf cpk
 u| kv² p l» ² u ki c| Āi { xqn0

Mgo^a n gl w² p n³/₄ vgnv| j cteck co gn| gm c u| w/
 v³ pu^a i ² u nerk^a wu gn³/₄ r² u² xgn x² i| fvgm o^a t
 o^a u lmggi eugrgno² p { gn0 XIO O qj co gf gi {
 xgu| vgw j^a dqtĀ w² p² r r gp Āi { pgo vgj gvgw ugo /
 o k n o kv c v³ ddk xgu| vgu wcmvf ». cnk c j^a /
 dqtĀ x² i ghgr^a ngtĀv v» ptc. o kv cn^a t KX0 M^a tqn/
 o ci { ct nk^a n0 J c M^a pucvkv^a r qn { v c| cpvcpv o gi /
 u^a nlc. c u| wn^a p w n j cf ugtgi² v grxgu| km x^a llqp u| g/
 tgv² c v³/₄ v² p² u| n^a vpk < o kv vgj gvgw xqipc. cn^a t
 o ci c O wu| vhc Mgo^a n cmqt. j c rcf kuj pcm ² u
 u| vco dwk nerk^a pcm u| Ārgvkm² u c| gi { guĀv cpi qn/
 htepek/qnu| hqv^a j qti qp { | kmcdm^a nekcrwĀ

Mgo^a n o gm² gw c| qp dcp n² u² i vgrgpĀn gt u² u
 ki c| gngp² txgm ku xcpnc0 N² vqi quwv xqnv O wu| vhc
 Mgo^a n j ctec c| | cn c XIO O qj co gffgn cnk v² u c|
^a ncr o gi cmvcpf » Āi V³/₄ ³/₄ nqtu^a i qv gi { u| gt gp
 ô j cvm qo l² n² ud n ô pgo gpi gf v g o gi u| Ārgvpk0
 K^a gp² tvrgo dgp kpf qnuv xqnv O wu| vhc Mgo^a n j ctec

XKO O qj co gf gmgp0 C u|wn³p n³pdgp ucl^av u|go²/
 n²dgp ugo n²rxkugv qn{cp p²rk rqrkkn¹v²u qn{cp
 gtn³4euk rkgf gu|³v³np^am» xk¹i p²|gvgv. co gn{ Mg/
 o^amcn u|go dgp v vgw xqpc o gi c| go dgtk tqmp/
 u|gpx³ti {^ax^a0

O wu|vchc Mgo^an xgv²mgf²ug²u i { |gro gu jct/
 ec KO Cdfwn O gf|uk fgn c. nerkt¹xen n³4gmg|gw gl/
 w³p0 M²w²i vgrp wi {cp. jqi { c nerkt¹ o²n³u¹c
²u c| c n³4³2p{. jqi { gl v c vku|w²i gv c xqiv³/
 t³4n v³p³4³n³4 v³4nk dg. dk qp{qu nup|gtxcv¹k gr/
 o gm Mgo^an/gmgpgu²u n³4³v³tuc¹i/gmgpgu tgo²p{gk/
 pgm cfjcvqw v³rqv. ô o²i ku xk³p hgn³an^am jqi {
 o ci^apcm KO Cdfwn O gf|uk ³gm v³xqt³n ugo^amqv
 u^apf²n¹dcp O wu|vchc Mgo^anv nk³tpk jgn²d n xci {
 gmgpg gi {^anci¹p hgn²rpk0 O wu|vchc Mgo^an o ci c
 ku ngu³4 gl v. jqi { šo clf. jc u|³Am²i ngu¹t^a. V³/
 t³4nqtu^ai kuo²v xku|c^an¹j cvlc nerkt¹wuk kp²|o²/
 p{²v²u ³l nerkt¹v ku x^arcu|vjcv⁰0 Mgo^an ô jku|gp
 v³ti {kci qu go dgt xqv ô o²i c|v ku grkuo gtvg. jqi {
 KO Cdfwn O gf|uk u|go²n¹g gmgp pkpeu ugo o k nk/
 hji^auc0 U v. Mgo^apcm o²i c t²ik xk¹ij^adqt³u
 kf ml n²u c i³4³4 jcteqm gu|vppf gkd n ven¹p tqmp/
 u|gpxgu ku xqv KO Cdfwn O gf|uk o qf gtp²u c| »³/
 t³4n³4mgn u|go dgu|gi ³An crenlc0 Mgo^an o^au o gi hqp/
 vq¹uqnd³n jcv³tq|vc gn jqi { gi {o^auw³p n²v u|k^ao k
 kntgv ku u²vrgt^andqp< gn u|³4 c|²xu^a|cfqm »vc
 gi {n²pv²n nerkt¹wuv²u u|wn³pu^ai qv. c|w³p Cd/
 fwn O gf|uk gv²u c|^ancrc dg³4n³4v o²n³u¹iq0 Mg/
 o^an c|v o ppfqwc< Cdfwn O gf|uk fgt²m go dgt. fg
 c nerkt¹wuv o gi ngm u|³Apvvpk0 ô ¹ { ngti gwg KO
 Cdfwn O gf|uk gv. c| gi {²dn²pv tqmpu|gpxgu go dgtv
 Mgo^an²ngv gi {km wqn³» dgr qrkkn¹ek jcte^adcp c
 u^ao |gv²udg0

Jc ¹ { x²i ki vgnk³v³pm Mgo^an jctecp. n¹vppm
 ngm jqi { c| Cdfwn O gf|uk fgn xcn³ n³4fgrgo w³p.
 c j¹gu pci { ³4u|ggum³x²u cmern^axen O wu|vchc
 Mgo^an gi {gpgu xqpcndcp vx^add n³4gwg gt u²u jc/
 v³tq|qw²ngv³Al^av0 Gi {gvgp²u ki gp p{qo »u gmgp²tx
 gttg c o gi^amcr¹u³tc eucm c| ngjgv< Mgo^an o quv
 o^at gi {u|gt gp l²ngwg c| gffki gr²tv tghqto qnev
 c| gugvgi gu^amco hqtf wew³n0 L³n wfvc. jqi { jc c

j cvm cv nleucxtl^a m c ng² d n g | gn pgo eucm v /
 plm gn c v^{3/4}v² pgrgo u^ñAm | gu v l² dgp. j cpgo V^{3/4}3^ñ
 qtu^a i o ci c ku. x² tgu dgr qrkkn^{ek} j cteqm n^ñ4 v³ t/
 uc^a i k² u o qpctej kmw r^a tvqm xgv² mgf² u² pgm u v
 r qn^a t^a dqtÀpcm ku u | Pj gn | g nji gv0 Ctt»n pgo ku
 dgu² rkg. j qi { dk qp^a tc c u | qo u² f qu j cvm cm
 ugo j ci { p^a m nkmp^a | cvcpwn c | gugvgi gu v^{3/4}3^ñ dgn/
 r qrkkn^{ek} | cxtqnev0

G | r g f k i p { qo » u qm co gn | Mgo^a n gn^a t^a u^a v nji /
 lqdd det^a vlxen² u j cvm qo tcugi P v kxn u | go dgp kp /
 f qn^a rlc0 C | qmnen c det^a vlxen u | go dgp. Pcnkngv c
 špci { 3^ñ u | ggum^ñ x² u^ñ ô o ci c P | { pgxg | v g nngpu² /
 i gk^v ô c j cñ rlc² u d^{3/4} v³ pdg m^ñ 3^ñ 4^ñ X² rgo² p { Æpm
 u | gtpv. g | c | gi { gvrg² tx. o² n » gi { gpu^ñ c o kpf /
 cppcm co kxn Mgo^a n v | gnpgm c | ² xgnpgm ck gug /
 o² p { gkxgnner euqr^v dcp x^a f qn^a n0

O quv r g f k i o qpflwm gn o kn | gp ku xqrv c | c dgu
 šhtctfcm qo ô. co gn | gv O wu | vhc Mgo^a n u | qn^v cpwn
 x² tgu. uwo o^a u gu | n^ñ 4³ 4^ñ mgnp { qo qwgr0

ZZK30C | gnpg² mrwu | wv^a uc0

P g dqp { qv^ñ uwm hngurgi gugp c | gugo² p { gn^v 0
 V^{3/4}3^ñ qtu^a i dcp gi² u | gi { u | gt gp c | v^{3/4}v² pv. j qi {
 ck^a mco h r qrkkn^a l^a xcn u | go dgp^a m » gnpg² nk r^a tv
 crenw0 C | o quv o^a t r^ñ p { gi² dgp o kpf gi { . j qi { g |
 c r^a tv vgx² n^ñ p { u² i² v t² u | rvgkdgp o gp gp j qi { cp
 hqn | vwc rgo

C f qri qm v^ñ uko^a p. gi { u² i gugp² u ukngtugp hgl /
 n fvgm O wu | vhc Mgo^a n u |^a o^a tc0 P | { c | w³ p² tvj g /
 v gp o gi u | Ævgwcl gnpg² m² u kki { u² i ku0

Grglpv eucm c j cfugtgi dgp Æ^{3/4} w² m hgn gnpg² nk
 j cpi qm c hgl Ængv0 C v^{3/4}3^ñ j cfugtgi o kpf ki ku r qrk /
 v^k a n0 O wu | vhc Mgo^a n cmqt. co knqt xqrv c j cf /
 ugtgi vci lc² u n^ñ x^a pvc c n^ñ to^a p { v o gi f³ pvgpk
 lqi quwmpcm vctvvc c j cfugtgi r qrk^k a^ñ u^a v. 3^ñ
 o ci c xqrv nji lqddcp hnj^a dqtqf xc. co knqt Cdf wn
 J co kf c | gnpg² nkr qrk^k a^ñ u |^a | cf quvdgeuwn^v w0

C | » v c | qpdc p c xk^a i uqnev x^a nq | qw. x^a nq | /
 vcm c p² | vgm u | cdcf u^a i lqi qm ku xk^a i u | gtvg0 O quv
 o^a t c | qpdc p gi² u | gp o^a u x² rgo² p { g xqrv O wu | vhc

Mgo^a rpecm c rqrkk^a n» jcfugtgit n0 Gi {nqtck dca vck
o kv Mlc| ko Mctcdgnk² u Crk Hwcf reuc jcfugtgi /
v³ dqtqpnqm p{ncp nkhegl² uv cf vcm grfi gfgv² /
i ãnpgm chrgw. jqi { Owul vhc Mgo^a n o quv o^a t ãi {
tgpfgl o kpf gpv V^{3/4} nqtul^a i dcp. cj qi { pgnk l»rgukn0
Gngp|² nkungf² u ãm n³ xgvng| o² p{g c| rgw. jqi { rg
ngngw o qpf cpk tciplwnt»n= fg n³ rxlugn k o kv u² /
i ãngv o gi vctj cw^a n0 ¶i { . ²tyjgv o »fqp. o² i ²rg/
ugdd gngp|² ndg lwqvcw Mgo^a mcr0 Mgo^a n ngl fvg
² ul tggppk jqi { xcrcv k plpeu tgpfdgp c| qtu^a i
n³ x² rgo² p{² dgp0

ô O kpf gpnk c| gi² ul xkfi wflc o gi. jqi {
ul^a o qo tc pgo r³ vgl jgvk rqrkk^a n³ d³ u² i 0 Fg
c| c| gm³ r| gr² u ugo. jqi { c r^a tvqm hrgw^a nqn0 C
n³ v³ tuc^a i j³ xg xci {qm² u gl c| ² p n³ v³ tuc^a i k
p² r^a tvqo rgi hnu dd gnxg0 G| c r^a tv c| gn jcteqc c
ul gngv k² u v³ tucfcm k gn tgi crf^a upcn0 Pgo w³ qo
gm³ r| gpk jqi { cnrfpc gi {gv³ v^{3/4} m ku. cnk gd/
dgp c| cncrxgv n³ tf² udgp o^a un³ r i qpf qm³ | pc#
G² tv pgo ku rgi gvgm nupm³ tgpv r^a tvqn0 C p² r^a tv0
c| gi² ul pgo | gvgv ³ rnk hnk c p² r^a tv rtqi tco tc lc.
c| gi² ul p² r rtqi tco o lc0 M³ hgl gw³ p n³ lgrgpvo .
jqi { ul^a o qo tc dgeu ãngv n³ tf² ug. jqi { pgo eucm
^a mco h. jcpgo wi {cpcm³ t gppgm c r^a tvpcw c xg/
|² tg ku o ctf lcm ô o qpf qwc Mgo^a n pgo uqn³ tc
gi {knj ¶i gur c³ rco gpvkdgu² f² dgp0

Uqnncpcw pgo vgu³ gw gl c| ³ p² t| gvu ul ¶pxcn/
n³ u0 Pgo eucm Mlc| ko Mctcdgnk. Crk Hwcf ² u o^a u
v³ dqtqpnqm jcpgo c| gn |³ w nerkc go dgtgk jqi {
eucm Tghv rcu^a v. ft0 Cfpcp dglv² u dca vck^a v go /
n³ u ãm ô grfi gfgv³ pngf vgm gl | gn c p{¶v ul ¶pxcn^a u/
ucn m pgo ãi { n³ r| gn² m² u pgo c|² tv v³ o qi cv
v³ m Mgo^a n. jctecpcw gngl² p. jqi { V^{3/4} nqtul^a i dcp
c xgl² t o quv gi {gfwcm cv r³ vgl³ ugp0 C| gngp|² m
l³ thck c p{wi cvk gu³ o² m o gi xcn³ u³ u^a tv ul^a mcm
jctedc² u ãi { n³ r| gn² m jqi { c eu^a ul^a tu^a i² u c
nerk^a wu c|² tv ul pv o gi. jqi { V^{3/4} nqtul^a i dcp c
p² r cnetev² u cmqvo^a p{qu² rgv rgi {gp ãt^a 0 G| gm
c| gm³ r| gr² ugm kf^a rucm² u ki gp ul² r gm ku xqncn0
C| qdcp gi { rqpvp v³ xgv gm cj qn xku qp v Mgo^a n/
pcw xqiv ki c| c0 C vrcu³ vrcv wi {cpku gi² ul t³ k^a f

lf crw o gi o wewc. j qi { c v^{3/4}m r q r k k n e k ² r g v
o ² i p g o ² t g w o g i c | š g n g p | ² m i n u t o ^a p { r ^a t v o
g i { g p u A n l ^a v n i t c 0 C v^{3/4}m n r x k u g n m t g x q r x g t t g n
l ^a t w e m g n c r c t r o g p v d g ² u t ^{3/4} k k f g u g p v g w r g i g u l ² i g m
² u t g x q r x g t f ^{3/4} t g p ² u g m | c l c x g t k h g n c | c p i q t e k r e t /
r o g p v g 0 C | A l h x ^a t q u n r x k u g n j ^a | ^a d e p c n r x k /
u g n m p g o c m u v o ^a p { q u . j c p g o f t e u | k m w u g u l n ^{3/4} ^{3/4} m
n g n n f k ^a p e m k i c | w n p e m p { q o c v ² n u v e f p k 0

G | g m w ² p v ^{3/4} v p v . j q i { c | g n g p | ² m x g | g v k ^{3/4} /
u | g h q i v e m ² u c n e k d e c n e t v e m n r r p k 0 M q p u e c p k ^a /
r q n f . c t e p i l ^a » n o g i h q u | q w g i { n u t k h x ^a t q u x q n v
c i { i j g n | g c | g n g p | ² m o g i o q | f w f u ^a p e n 0 G | c | g n /
n g p | ² m x e n u ^a i q u P q ² d ^a t n i l e x q n 0 M e r k i ^a w u j f k m
q t v j q f q z o q p t e j k u ^a m t e f k n i r k u n ^{3/4} v ³ t u c u ^a i r ^a t /
v k e m ² u u l ² n u u ² i g u d e m f e r k e m h q i v e m ^{3/4} u | g . j q i {
c | ^a n e o j c l » o g p g v ² d g g n g p u | g r v h q i l e p e m d g 0 C
n u p u e c p k ^a r q n f k u e l » . c o g n | u q m e n n d g t ^a r k u e d d
² u g n g p | ² n d d x q n v o k p v c | c p i q t e k j f k g p v ^{3/4} m ^{3/4} v g
c x q n v h x ^a t q u r q r k k m w u c k p e m h e n q i ^a u ^a 0 → r ^a t v
c r e m w v c o g n | p g m p g x g š n ^{3/4} v ³ t u c u ^a i k j c r e f » r ^a t v o
r g w 0 G i { k m x g | g v l g F | u c x k f d g l . w i { e p c | c x q n v ^{3/4}
t ^{3/4} m r ² p | A i { o k p k u | v t . c n k c j ^a d q t A n k ^{3/4} ² u g n u t r g /
n ^{3/4} ^{3/4} p v t e p i l ^a t » n ² u p ² i { ² x g p ^a v p g o x q n v j c l /
r e p f » u g o o k u | g t g r g v x ^a m e p k 0 G | c F | u c x k f d g l x q n v
m A i ^{3/4} p d g p c | c l ² t h k A c n k v c n g i { | ^{3/4} w V ^{3/4} ^{3/4} n u t u l ^a i .
h e i { x g t u | A p g k n ² t u g n u t o c i ^a p { ^a d » n g n j f k q w ² u
c t t e n ² t v . g u l n ^{3/4} ^{3/4} l g n k ô o k p v c j ^a d q t A d e p p g o
u | g t g r g n v l ² t h k A ô . j q i { j c | ^a l e n g f x g | h e n ² v e r g n g v
n e r l q p 0 G | c u | k n i t . o c i c u i c n ² t q u . e u f r v g u A t
g i { ² d n ² p v k u k i g p m A i ^{3/4} p ^{3/4} u g o d g t x q n 0 C | u k f » x e n /
n ² u v n ^{3/4} k g w g . c | q p d e p u l ^a t o c | ^a u ^a t e p ² | x g p g o x q n v
š l A f g e k x ² t o d g p p g 0 C | A i { p g x g | g w š f ^{3/4} p o ² n o ² r /
r g p U c n p k n i d g p . O w u | v e h e M g o ^a n j c | ^a l ^a d e p x g v
v ² m h e n g i { k f d g p c u | q o d e v q u | u k f » x e n ² u 0 X c /
n e o k U | e d d e v ² l U ² x k p g x ^a r t » l ² v e c r e r f q w e g l v
c 0 š f ^{3/4} p o ² o / j k g v ² u x g w g t ^a c l ^a o d q t u | c n p k n i k o w
| w o ^a p q n e v . j q i { c | u k f » t f w u v h e r x g i { ² n 0 F | u c x k f
d g l . c f ^{3/4} p o ² m g i { k m n ² u g k r g u l ^a t o c | q w e . c o k n u t
c j ^a d q t A d e G p x g t d g r g u q f q t v e V ^{3/4} ^{3/4} n u t u l ^a i q v e t e d .
^{3/4} o ² p { ² u c v ^{3/4} d k m u g d d u ² i k u l ^a t o c | ^a u A o k p k u /
v t v ² t u c k e n o ² i c | p e r n g n ^{3/4} ^{3/4} p v 0 P g o k u w f v c c

j^a dqtÀ ugo o kn{gp gugo² p{g gl gngv c o kpkul vgtgngv
gn t^a pi cvpkr cuu| ¶k gngp^a n^a uwnd»i0

F| ucxkf o quv c| v j kvg. j qi { r^a tvlc grkxk o gi /
xcn»u|v^a u^a tc kw c ngf xgl r kncpcv0 F| ucxkf² u Gwt»/
r^a v l^a tv v^a tuck xqncm c ul gnggo k xgl² t^a gk c| Àlqppcp
ul Ængvw n^a4 v^a tucu^a i k j cxf» r^a tvpcn0 O ci cutepi
v^a dqtppnqm o kpv Mlc| ko Mctcdgnt. cnkm gngp Mg/
o^a men xcn» eko dqt^a |^a u o kw XIO O qi co gf o² i
cpcncf gl² p grhqi cv» rctcpcuqv² u j cñ^a nqu ¶² rvgv ku
¶² tv cñ^a. xqncm gppgm c n^a4 v^a tucu^a i k j cxf» r^a tvpcn
v^a ddk h v^a o cu| ck0 Kw o kpl^a tv gn tgdqeu^a l^a vwm
j qi { Mgo^a n w»fc. Ko gv k³ p³ Æ^a nco h. g l² thkm
o² i² r^a vdg p r² x t² u² v t^a gj cdkk^a nc² u Àtc o ci cu
o² n»u^a i dc j gn{gl v^a G| v c| gn tgp{ Æ^a uv c| gugo² /
p{gnlg. c|² tv v^a tvwm ul Æ^a n² i gupgm o gi go r² gpk
j qi { t^a o wcuwpm j qi { c j kxcvcmu v³ /³ m hrhqi^a u
o c o^a t o^a u gddgp c n² t² udgp. o kpv xqrv O wul vhc
Mgo^a nk gl² dgp0

Gi {gn tg c| qpdep o² i eucm qw vctwpm j qi {
c n^a pucp^a r qn{k n^a4 v^a tucu^a i k j cxf» r^a tv c šVc/
pkō/dep gddgp c pci { n^a pucp^a r qn{k nr dcp.
^a mcpf» ekmgngv vgu| n^a4 |² c xcn»fk fgo qnt^a ek^a t»i0
Wi {cpcmqt c| cpi qtck n^r xkugn j^a | dep ku ul gtxgl /
ngf km c n^a4 v^a tucu^a i k j cxf» r^a tv0 O^a t l» wecv{ k
n^r xkugn vctv| km c v^a dqtwnlc0 Mgo^a n pgo gi {
j ¶² kg ul gi Æ^a n o quv o^a t gngp c i j^a | k^a nco xgl gv² u² pgn0
Pgo gi { n^r xkugn j ci {vc qw p{ ¶² mcp. xci { ngx² u/
d² p{ ¶² mcp c šn^a4 v^a tucu^a i k p² r r^a tvqō. Mgo^a n nqt/
o^a p{ | » r^a tv^a v0

Mgo^a n co knqt r^a wc. j qi { c| gngp|² m o kpf j c/
v^a tq| qwcddep ul gtxgl ngf km gngpg. gi {gn tg vcmk/
nek qnqnd»n l» pcm r^a wc xku| cxqpw»v h^a lpk0 O² i /
ugo ngi gv. j qi { ul kpv j gvpgv r^r lgp nk gi { /gi { j ¶² kg
c n^a4 v^a tucu^a i k p² r r^a tvd»i0 Mgo^a n x² i Æ^a n ku grlv^a gw
o kpkul vgtgp³ /^a v0 C| gngp|² m c| qpdep gl| gn pgo /
j qi { o gi i {³ pi Æ^a n xqpc. j cpgo² r rgp o gi gt u³ /
f³ w Mgo^a ncu| go dgp0

Mgo^a n c| qpdep wi {cpcmqt gngpj Æ^a utc n^r /
ul Æ^a n f³ w0 O gi x^a rcu| vqw gi { km ngi dgpv dd j ¶² x² v
n^r xkugn j^a | k gp³ /^a pgm j c o^a t o kpkul vgtgp³ /^a v n
o gi ngngwx^a rpk0 G| o² i eucmqrl xqrv c | tgo

C $\sqrt[3]{4/3}m$ n \bar{r} xlugn j^a | dcp $\tilde{A}i$ { c | gmgp | ²nk^m o kpv
 c nqto^a p { r^a tvk^m j cncvcp lgrpgvgngv r tqxqnf^a mcn⁰
 Dqt^a p { qu^a mcr qqm r^gwgm $\tilde{A}t^a$ c | cpi qtck nku.
 go grvgu qtu^a i i { r^uk ²r $\tilde{A}r$ gdgp⁰ C n \bar{r} xlugn m
 netffcn² u t^gxqrxgttgn lgrpgvgm o gi c | $\tilde{A}r$ ugngp. \hat{o}
 c hqn { qu^a m r g f k i pgo gi { u | gt qtf^a | u^a w^a n² u u² tv^g/
 i g² uv n fg i { cntcp xgtgngf² uv n ku xku | j cpi | qv
 vcn⁰ G | gm c dqt^a p { qm ki c | qn^a m c | v c v² p { v co kv
 Mgo^a n o kpf ki j cpi u^a n { q | qw² u co kdgp v^g r l g u g p
 ki c | c ku xqn^a c pci { u | cdcf u^a i² u cmqwo^a p { quf k
 v^a n j k v g n p² tng | gw gn c | cmqt o² i rctrcogp^a /
 tk^a p kunqf^a | cvcp $\sqrt[3]{4/3}m$ p² r u^a o^a tc⁰ Gi { pgo | gv
 xg | gv t² vgi g. co gn { ²xv^a | gf gm » v. ^a mcp^a » cp u | w^a
 v³ pqnev eucr qw gn² u ³ u | ggum^a x² u g n g v u | w. qw
 Mkr^a | uk^a dcp. o² i c Dcm^a pp^a n ku rglldd. o^a t » n^a
 j qm^a r t c pgo x^a r j cv qn { cp o ci cu u | p x q p c n^a i { \tilde{A}
 r n g | gw². o kpv c pci { p { w i c v k f go qm^a ek^a n⁰

Uqm gugo² p { tg o² i o c ugo fgt^a n xk^a i qu^a i⁰
 O kpf c | . co kv g | gmpgm c | ² x g n p g m n w k u u^a m o $\frac{3}{4}$ $\frac{3}{4}$ k
 gugo² p { gk n w f w p m eucm nku t² u | r v g c p p c m co k
 xcn^a dcp $\sqrt[3]{4/3}p$ \bar{R}^2 r^a n^a v r j g v eucm hgnqtqpk⁰ C |
 gi { km n \bar{r} xlugn v r² r^a v n J crk^a dgl g | t g f g u v \hat{o} Gp/
 xgtpgm gi { km n \bar{r} 4 grk tqn^a p^a v \hat{o} c rctrcogp^a k hqn { q/
 u^a n q p gi { u | gt gp ci { qpn w² m gmgphgk⁰ J qmwug
 qw o c t c f v c x^{3/4} $\frac{3}{4}$ u u | p { gi gp² u c | x² tg xqnv c |
 gnu . co gn { c $\sqrt[3]{4/3}m$ n \bar{r} xlugn j^a | ² r $\tilde{A}r$ gdgp n \bar{r} 4⁰ n \bar{r} 4⁰

O^a u i { km qu^a i ku $\sqrt[3]{4/3}p$ C | gi { km gmgp | ²nk
 n \bar{r} xlugn v o gi j^a x^a v F | uq^a r^a n Q | o^a p dgl. O w | v h c
 Mgo^a n v g u v t u² i² p g m v^a n d w | i » rctcpeupqnc gd² ftg⁰
 Mgo^a n o kpf gtt n rgtu | g pgo w f q w⁰ C d c t^a w^a i qu
 o gi j^a x^a v c c n \bar{r} xlugn gn ku n^a v i c v q w c v g u v t u² i k
 r c n q^a d c \hat{o} c n e r w d e p^a m » j^a | t u² i h g u | g u g p v k u /
 v g r i g w. \hat{o} c | w^a p c j^a | k i c | f c gn u k v g w c x g p f² i
 h q i c f^a u^a t c² u p² j^a p { » t c o $\tilde{A}r$ x c c o g i i { km q n v g n
 r p | ²nk n \bar{r} xlugn j q n w g u² v n \bar{r} 4^a m nk F | uq^a r^a n Q | /
 o^a p² m x c r c o k g r f w i q w. l² r t g g u n e o t^a d c⁰ Co knqt
 c | w^a p O w | v h c Mgo^a n c | g m \bar{r} 4 x g v w v g w o k w j g /
 x g u u | g o t g^a p { ^a u q n e v v g w g | t g f g u² p g m g | c x c f
 l² t h^a \tilde{A} l c d d g t u | c n q u n q f^a u q n t c t e i c f v c w c o c i^a v.
³ u | g u | g f v g c n^a | k u | v³ p k j g i { g m n \bar{r} 4 $\frac{3}{4}$ v u | $\tilde{A}r$ g v g w
 x c n⁰ g t v g u v t r i² p { g k v² u < \hat{o} u | c d^a n { qu q u t q o q v

kp²| gw O wu| vhc Mgo^a h eucpncck rcmq²lc gmgp#
Xcn²u²i qu v| jcte hgn f^{3/4}w nk ô F| uqr^a n Q| o^a p
r gf ki j qncp o ctefvc rcmqc m²u| ^{3/4}d²p0

Gi { o^a ukm gmgp|² nk n² r xkugn v. pci { dgu|² fg
w² p. gi² u| gi { u| gt gp c| cpi qtck we^a p j^a | c gn w
n w² mrg0J qi { nk ctte uqj c pgo fgt² ²u| xk² i qu² i 0

Mgo^a n vgt o² u| gvgupp u| ²u| xg o² n² d n gr² v² ng
g| gngv c dtw² rku gu| n² ^{3/4}ngv0 O² i uqn² rjg gvp g hqn/
vcpkc| gugo² p{ gmgrkcf w² u² pcmr² u^a v0

Fg gi² u| gp o^a u k^a p{ d² n ku grkpf wv c vci kmw
gugo² p{ gmuqtq| cvc0

G| gtnk² p² u| j wu| qpj cvdcp o gt² p{ rgyv n² u|
tgnm o gi c| ^a nco h gmgp U| o k^a p^a dcp0 O wu| vhc
Mgo^a n pci { ²u| pgr² n² gu² i i gn xqpww dg c x^a tqdc.
o kp^a nco h ²u| o kp^a n² ^{3/4} v² tuc² i k gp^{3/4} n0 C tgp² /
tu² i vgt o² u| gvgupp c| gn| per qndcp crer qucp
š^a v² u² ²u| ngō c x^a tqw0 f ncr² pqu o gi rgr gv² utg o gi/
lgrgpv c tgp² tu² i gp gmuqt gi { ^{3/4} gi jcl² u. cnk gn/
cfvc < o kn² gp i { cp² u| qn^a nvc n² t² m hgr0 C| v
o qpf qvc c| ^{3/4} gi. jqi { U| o k^a p^a w^a n pgo o guu| g. c
vpi gtgp u| qn² w gu² pn² pv jcn² u| i cvk0 Kio gtgv² p
go dgtgm hmg² tu² m ²u| hgn cnet^a m d² tgrpk jqi {
rjg { gp gi { dk qp{ qu »^a dcp c nkn² ^{3/4} gi { km rqp^a p=
xk² { g^a v ngv Ej kqu| u| ki gv² tg. co gn{ o^a t i ^{3/4} ^{3/4}
hgppj cv² u² i cn² vctv| kn0 i { lwwq w c tgp² tu² i
p{ qo^a tc gi { ^{3/4} u| ggum² x² v² tuc² i pcm cnkp² n
dqo d^a nev ku vcn² ncn0 C nkj cni cv^a u uq^a p dgxcmq² /
v^a m c o gt² p{ n m jqi { g dqo d^a nev c| gi { km u| o k^a pek
j^a | go grvk cdrcn² d² n u^a p² n² u| v^a m O wu| vhc Mgo^a n
gr² f qdpk0 O kw² p c| qpdc c tgp² tu² i »^a m crw hgn/
i ^{3/4} pi { ^{3/4} u| gwg c| gi² u| o gt² p{ n htqpqv. Mgo^a n c dg/
xqpw² u c m^a xcn o kpf gp kpek gpu p² m² n² xqpw/
j cvw^a v. g| gp c xgu² n² gu² ²u| cne² u| qp k0

C tgp² tu² i c| qpdc vx^a dd p{ qo q| qw0 C tgp² /
tu² i k p{ qo q| ^a u gtgf o² p{ g c n² ^{3/4} v² tuc² i k jcnf »
r^a tv n² r xkugn kj g| xg| gvw0 C| gi { km gmgp|² nk n² r/
xkugn. \ kc J wtukf dgl x² i ²u| n² ku dgkuo gt xcmq^a uv
v² u| c tgp² tu² i gn w0 C| v xcmqc. jqi { u| gt/
xg| v c| gi² u| o gt² p{ rgyv0 \ kc J wtukf dgl xcmq/
o^a uc crer^a p o quv o^a t gi² u| gmgp|² nk vknqu dk/

|quw^aiqv rgrngl gw ng c tgpf tu²i0 f n¹mi c| xqrv
 c šdk|quw^aiō e²rlc. jqi { O wu|vch Mgo^anv gngi {g
 rfd cⁿn w^apc r g f k i^a wgi {g c j c w m c v O k p vi {
 u^a| go dgtv. šx²ngv^aō 2^rrgp c| gi²u| gngp|²ngv.
 ngvtv| vcvqwttg c tgpf tu²i0

C| gngp|²m o quv ngvtv| vcvw xgl gv kt n rg/
 fki v³4v²pgm k v²p{ ô o kpf gp n³4 v³tucu^aik k^ap{²
 v³4³m u| cⁿo w p n¹dcp ku hgn^an¹ij cv» cf cv ô jqi {
 gl gm c l²thcm l» k f gki Mgo^an rgi qf ccf»dd²u rgi/
 d^avtedd ugi v³tuck xqncn0 C| qpdcp c| v ku o gi
 ngm cf pk jqi { c ngvtv| vcvw gngp|²nk xgl²tgm ugo
 xqncmepi {cⁿm o²i ngx²udd² c m²wkuc go dgtgm0

C| gngp|²m xgl gv kv o quv gr²tv² c pgo gl ku0
 O clf pgo xcrco gpp{ k p d³4v³pdg ngt²ngn0 Ncn¹uw/
 nup fgv m¹kgm lgrgv m o gi²u ncvpck hgf gl gv crw
 u^a n¹q w^a mxcrco gpp{ k²ngvc n³4pd³4 hqi j^a| c mdc0

M³4 dgxgv rgi o gi ngm go r²ngl pk ctt»n ku. jqi {
 o²i gi { n³4 dgg u o gi o q| f w^au ku hgn^api qrv c Mg/
 o^an¹vtcrco gngp0 G| c| gugo²p{ c m²fqm hgmgr²ug
 xqn0 C m²fqm gi²u| gp o^au qnd»n r¹| cf vcm hgn
 o kpv c| gngp|²m rkdgt^a rku²u f go qntcv xgl gv k0 C
 m²fqm hpcv^awu. o xgrgv^ap. fg d^avt²u xcno gt
 jgi {k p²rg. gi {u| gt gp ô 3⁴f³4³4 n¹vqw c o qf gtpk/
 |^an» n³4 v³tucu^aik^a nco h dgp0 Xcpcem qn{cp xgt/
 |k>m ku. jqi { c t²i grj c n¹ K0 Cdf vn J co kf u| w^ap
 gi {km hc. U grko jgtegi ô wi {cpc|. c m²n o^at
 gi {u| gt u|» gugw ô u| v³qvc c m²fqm r¹| cf^au^av0
 G| c U grko jgtegi ngw xqpc c m²fqm n¹rlc/lg/
 r³4mg0 Ogtv c m²fqm e²rlc pgo eucm Mgo^an gn|²ug.
 fg c vgrgu »o qj co gf^ap t²i k tgpf xku| c^a n¹uc ku
 xqrv ô xku| c n¹p {ctqfxc c u³4²v n³4²r nqt d c0 Mg/
 o^ancm gl gm gngp xc» jct^av c| gi²u| o xgnv xk
 n¹i tqm¹pu| gp²xgnn¹u²tv0

C m²fqm n¹ xc» j^adqt²ng^au uq n¹ki vctvq w0
 C| cpi qtk nqto^ap{ eucrcvck pgo wf vcm c|²i ki/
²t jgi {gmn³4³vi {qtu ukngt gngv gr²tpk0

C dgnu hqtcf crqo j q| vj^av o²i u| cd^an{ qu
 p²r hgmgr²u ku l^atw n0 O wu| vch Mgo^an gt²n{ gu gr^a/
 t^auc ki c| q n¹u^atc u| q n¹ n jqi { c rgi w»ddk j»pcr qm
 gugo²p{ gk xc»dcp xcung| gv n³4xgv ngn0 J c gl v¹{
 o gi { vx^add. Mgo^an pci { o w p n¹lc xgu| gp f dg

o gi {OV^{3/4}mtu^ai kuo²v c| cpctej k^adc u^ām{gf 0

Fg j^av c| v³p o quv pgnk ku^amv Owu| vhc Mgo^an
c tgpfeukp^an²upcm²u qn{cp tgpfgv vgtgo vgw V^{3/4}m/
qtu^ai dcp. co kn{gpt n ugo c| cdf wj co kfk fg o²i
c| Gpxgt/kf m go dgtgk ugo^aro qf q| j cwcn0 C mxt/
fqm gngp vgw n²vqpc k p^v| n²g²ugm c eucrcvqm u| c/
rqt^vuc. v³/d^ai {Axcn²u tgr^ānⁱ2rrgn xcn² hgn| g/
tgr²ug²u c rci {o cvci rctcpeupqnm hgrug²if²ug
w³p o quv o^at gm³/xgvng| vgm c pci { v^{3/4}m rqrkk/
n²kr gtgmk0

R^at j»pcr o^āxc eucm^āi { t^{3/4}n^{3/4}v³gm c j c^ā/
m²u² r²v²gm² r²ghqi { vⁱ r²pk d^{3/4}v³p³m²u u^ao | g^v/
ugn0 C| gm²|²m xg| gv k gi { nku t²u²pgm uk²g^ān^v
eucmm^āif²tg o gpgm^āpk0

Mgo^an gn u^{3/4} ku hgr^āi gu| vgw c| cm²o^ap{v0
Mx²v²gu^ancr qvnev r²r v²gw² r²vdg0 M²v²p^am u| w/
tq²{qm²u f v²gm²/xgmlgngp²gm²o gi o k²g^āw0

J wu| gk² F| ucj kf. c šVc²pkō p²x pci { gm²/
|²nk rcr u| gtng²v lg xq²v c| gnu gn²n0 | r²ghqi {/
vⁱ r²pk u^ao | g^vutg² r²n²n0 C| Āu^ai qm l>t²u²v
dgv^āq²m xci { egp| Āc c^ā xg²n0 Tcwh dgl gn
o gpgm^ā0 Ft0 Cfpcp dgl²u hgr²ig. J crk²g Gf kd
J cpwo r²»p. c t²ik v^{3/4}m u| Āt²c| ug²wj cteqm gn/
j cteq². Mgo^an gr²gk²gm xcn²gt j k²f²gv lg. u| k²/
v²p m^āif²tg o gpgm^ā0 G| c| cu²qp{ c Mgo^an^j^ade/
t^āv c ij^a| k qf c^āp l²th²w^adcp. x²i ki j cteq².
Owu| vhc Mgo^ar²tv xcn² r²mgug²ud n co k²tv X²
Oqj co gf j c^ār²tc ku r²ng0 X²r²v²p^ān²rrgp c| pcr.
co kn²t Owu| vhc Mgo^an gm²cf v nk c| ghqi c^v/
rctcpeuq0 O k²g| pgo vk²qm o²i c j k²cv²qu M/
o^an²r²vtcl| qmku o gi go r²ng| p²gm²o k²gtt n0

C u| o k²pk³u³ggm^āx²u²gn gn²pf²v² pci { rgt
ng²p{ r²v²ngv² xq²v o ci c w²p0 M²c| ko M²ctcd/
nk²u C²rk H²vcf v²dq²p²qm c| qm c l²th²cm c²nk²
gnu p²m^am² o k²v j c²v²cu i g²g²t^aru²qm c| cm²qt
o²i r²| cf» Mgo^an²r²vgu²n²gu qf c^ātc. u| k²v²p
qf c²ng²ngm u| wtq²{qu d^{3/4}v³p t³m uq²th²rc n^{3/4}v³ c
u| o k²pk^mpd²»u^ai x^af²ng²w²l²pc²mr cf^atc0

X^atc²v²p h²tf²w²v n³/xgvng| gw c| q²pdcp dg c|
gug^āndgp0 C d²»u^ai h²ro g²v²gw o k²ngw l^āngv c
šh²ng²i^atw²uō x^af²lc c²n0 C v²tgo dgp r²x j c²m²c^v/

u^ai r g f k i f^{3/4}i v r u x l j c t d c v p v^{3/4}v n i 0 M g o^a n 3/4 A n m
 j q i { c h A i g v g p v^{3/4}3/4 m d f t » u^ai h g r o g p v g w g i { /
 n q t k d e t^a v c k 0

C v^{3/4}x²p { u l² m v k g p^{3/4} g m g p l² n k x g l g v v f² n v
 j c r^a i t c. c n k m c l | c n x q n c m x^a f q r k c. j q i { t² u l x g w g m
 c M g o^a n g m g p k 3/4 u l g g u m A x² u d g p 0 C x^a f h g n² i^a t w i^a u
 x q n v g m g p A n k u 0

C l f² r g v g n g v x² i t g j c l v q w^a n 0 J c r^a i n q u f² r g v g v
 o q p f q w c m n k j^a t q o x q n v o k p k u l v g t t g. g i { r c u^a t c.
 v^{3/4} d d n³ r x l u g n t g² u c l 3/4 u l g g u m A x² u d g p t² u l x g w
 \ k J w t u k d g l t g² u C t k f d g l g l t g f g u t g k u 0

O q u v o^a t o k p f g p n k o g p g m A n m c o g t t g n^a v q w² u
 c n k v g j g w g 0 O w u l v c h c M g o^a n p g o^a n v o g i l² n A x p 0
 F t 0 P c l k o d g l v. t² i k d e t^a v^a v. c n k o² i c l C d f w n
 J c o k f / g m g p g u h q t t c f e n q o k f g l² d g p g z r q p^a n c o c i^a v.
 u l k p² p j c r^a i t c f² n² n 0 F g A i { P c l k o d g l g p. o k p v
 c o^a t g o r f f g w n³ v r q r k k m w u q p. T c w h d g l g p² u f t 0
 C f p c p d g l g p. p g o w f v^a m c j c r^a i n q u f² r g v g v x² i t g /
 j c l v c p l 0 G l g m c l² t h k m o^a t g n | r g i g r o g p g m A n g m
 P { w i c t c 0

X l u l q p v F l u c x k f d g l. c l g i { n q t k r² p l A i { o k p k u l /
 v g t p g o x q n v j c l r c p f » o g p g m A n p k 0 J k f g i x² t t g n x^a t v c
 o g i u q t u c d g v r l g u g f² u² v 0 J k^a d c h k i { g r o g l v g w² m d c /
 t^a v c k < o g p g m A n l³ p x g n A n 0 F l u c x k f d g l A i { j k w g <
 k i c l c x e p² u g p p g m w f c v^a d e p d^a v t e p^a m v d f^a k g r² 0

J c r^a i t c f² n² m c l k f u l² t h k 0 H g j² t l p i g u j q n /
 v g u g p g o u q n^a i t c q w e u A p i 3/4 v c x² u l v^{3/4} x² p { u l² m w f /
 x c t^a p h g r^a m f i q w. c r e u q p { . f w x^a p^a e u q n v c n e u l w l^a p 0

C l 3/4 u l g g u m A x m p g o x q n c m v^{3/4} d d² 0

i { h g l g l f^{3/4} v d g c v^{3/4} 3/4 m 3/4 u l g g u m A x m g n u
 o g i o q l f w i^a u c 0 C l A l n³ 4 v³ t u c u^a i k g r p^{3/4} m p g o v t v g
 o v r i p p g o k u v t j g w g o j q i { c l g m g p l² m v g t /
 x g k v² u r t q i t c o l^a v n g t g u l v g l | g 0

M f u² i v g r p. j q i { c p c i { t g h q t o^a v t. O w u l v c h c
 M g o^a n h c p c k m w u c p j k v u c l^a v m A r f g v² u² d g p 0 H f n g w g
² r g v o x² v² u g l x q n v t w i » l c t c f k n^a i r k u e u g r n g n f g v g k /
 p g n 0 J c p g o k u g i { g l g w g n^a t^a u c c u l c d c f u^a i t » n² u
 c m q v o^a p { q u u^a i t » n x c n q w g r k g k x g n O w u l v c h c M g /
 o^a n o² i u g o l^a t v g n l q i v c r p w n g l g m l g p c l g u g o² /
 p { g n l g p 0 C l q t u l^a i l³ x l g u l g o r q p v^a d » n o g l v c l
 c l » c g n g n v² x g m g u g o² p { g k o g i o w c w^a m o x c n /

dcp Mgo^an wcm c lgrpgvgw c hrgo gmgf²u0 O wu/ vhc Mgo^an gppgm dk qp{qu^ai^at>>n vrlgu u| wdlgm/ xk⁷u^axen o gi xqiv i{ | fxg0 G| ki gp xcn>u| p . u v dk qp{qu ku0 G| o gpvj gk w^ap gn^at^au^apcm ngo²p{/ u²i²u0

O^au n²tf²u c|. jqi{ u| Am²i xqiv/g kn{gp ftcu| vkwu gu n²/4³ntgA Gttg c n²tf²utg ški gppgm ngm hrgpAm⁰ C| dk qp{qu. jci{ c jcte kn{gp²gu n²hln f²u²pgm u^afkw^adcp u| » ugo rgj gvgw o^at d²n²u. n²/4 xgv² o gi qif^auqnt>>f0 J c c| gmgp|²m xg/ | gv k pgo o gppgm O wu| vhc Mgo^apcm ngmgw xqpc o gppkg. gnv ppk0 | rgj c^aij ctep^an pkpeu h²no gi/ qif^au0

ZZKODgnu All^a2r²u0

Gppgm c| Ai {pgxg| gw špci { 3/4u| ggumAx²upgmō ngm²f²u²xgn rg ku |^atwncm c|qm c pci{ dteqm co gn{gm O wu| vhc Mgo^an x²i u gi {gf wcm^av dk/ vq²q²n0 Oquv. co knqt c n²/4²tuc^ai dgm j c/ vcm k j^adqtAk x²i gv²tgm< x²itg gm²/xgvg|j gvgw c| c| kf u| cm co gn{ o kw wrlf qp^ar r gp c uqm gn euc^atq|^au hqn{v0 Grl³/v c| crqj gq| ku< Mgo^an c^a/ nq^au^apcmkf u| cm0

3; 48/»n 3; 5: /ki. O wu| vhc Mgo^an j c^ar^aki. v/ | gpn²v j quu| A gu| vgpf vgnv gr0 G| c v/ gpn²v gu/ vgpf c v²/4³m pgo | gv v²/4²pgv²dgp c| c| kf u| cm co gn{tg o²n²p dAu| ng rgj gv0 Pgo | gv hln f²u v/ n²pgv²dgp g| c v/ gpn²v²x o gi hrgn uqm u|^a |²x gn tgj c^af^au^apcn0 C j k vrgp x^anq|^auqm vgt0²u| gv/ ugp o²i p²o k gmgpj c^au^acn l^atvcm= j ku| gp g|²tv xqiv u| Am²i g gffki ku Mgo^apcm ctte c tgpigvi dgnu jctete²u gt²n²tg. jqi{ c e²rlck gr²t²ug gr² vqp{quw> c^af^an{qnev gj^at²uc0 Fg pci{ jcteqm g| w^ap o^at pgo n²/xgvg| vgn0

—i { j kuu| Am n²i e²nu| gt dd n²r²v cflwm gppgm c v/ gpn²v d²nggu| vgpf pgm cmqt. j c 3/4u| ghAi i gp hgnqtqrlwm o km ku c|qm c| Ai²uqm²u x^anq|^auqm co gn{gmgn O wu| vhc Mgo^an o quw o^at c jcvnqo x²i n²i gu dktv^adcp. o gi cl^apf²nu| vc pgo | gv²v0 C tghqto qm kuo gtvg²u²v kf tgpfk uqttgpfv n hAi i gv/ pAn c| qm/ cvk 3/4u| ghAi i²ugm n²peqr^av p dgnAn nku²/

tgrĀm o gi xku|ccfpk0 Ok v̄4v̄pv c| cmqv̄u v̄k gp/
n̄v̄2xg crwA

Gru fqri c xqrv Mgo^a rpcm c v̄4³/_m cmqv̄o^a p{v
2u c|^a mco ki c| icv̄uv v̄grlgupp o qf gtpk^a rpk0 C| Ā
cmqv̄o^a p{v 3; 46^a rtkku 42/^a p j k f g w² m nĀ0 G| v c
j[¶]gu v̄4³/_m n̄4^{v̄} tucu^a ik ej ctv̄v 3; 4: o^a lwu 42/^a p
o »f qu[¶] qw^{v̄} n0

C| qtu^a i v̄grlgupp c fgo qnt^a ekc. gi {gn j qp/
r qn^a tk lqi qm² u n̄4^{grg} gw² i gm crcl^a p^a n0 O kpf gp
430² rgv̄xgv dgv̄4^{n̄4} w l̄t tk² u p i {cmqtqij cvlc c
x^a rcul^{v̄} uqnp^a n x^a rcul^{v̄} uk lqi^a v0 C| qtu^a i cnetev̄/
pcm o gi p{ kx^a p w^a uk u| gtxg c| Ā0 p0 ŠPci { P go | gv
i { r̄u0 Gppgm 64; v̄i lc xcp. cnkm 6² xgp^a v v̄gr/
lgv̄km n̄r xkugn k j kcv̄ uwrv0 C|^a mco hlg c M̄4/
v̄tucu^a i gp³/_{ng}. cnkv grkrgi c n̄r xkugn m x^a rcul^{v̄} v̄pcm
uel^a v uqtcknd»n0 C| gp³/_m o cpf^a wo c 6² xki v̄ct0
C|^a mco h c| qtu^a i i { r̄u cnetev̄ d>n vj^a v c p² r
xg| gv lg= c ngi h dd n̄v̄qpck rctcpeupqm ku² u^a n
v̄r̄d̄dep o kpf gp x² i tgj cl» j cv̄m̄o i {cmqtn>lc0 Iq/
i ck n̄4² v̄ctv̄| km j qi { c o kpu| v̄tgp³/_{n̄4} v̄² u c nqt/
o^a p{ v̄i lkv n̄kpgxg| g. c| qtu^a i i { r̄uv³/_u gj[¶] klc
² u hgm̄u| r̄uuc ô fg o kpf g| v eucm o kpu| v̄tk gm̄p/
lgi {² u o gm̄gw v̄j gw0

T² i gddgp. co knqt Mgo^a n o² i pgo xqrv jc/
v̄m̄o c v̄grlgv̄ dktv̄n̄d̄dep. c n̄4^{v̄} tucu^a ik gp³/_m jc/
v̄m̄o^a pcm o² i p² o k n̄qtr̄ v̄k xqncn0 G| gm c| qpdep.
² rr Āi { . o kpv o c i c c| gm̄p|² m kf xgn v̄grlgupp gr̄
v p̄gn0 Gttg u| qn^a n̄v̄c Kkkm o »f qu[¶] qwcmqv̄o^a p{0

G| xqrv c n̄gtg0

C xcn̄u^a i d̄ep c| qpdep c| xqrv c jgn| gv. j qi {
xqrv vi {cp fgo qnt^a ekc² u p² r n̄r xkugrv̄v̄ ô c| qpdep.
o kw^a p eucm gi { r^a tv̄v̄ gpi gf² n̄| g| gw c|^a mco jc/
v̄m̄o . o² i ugo² tx² p{ gu[¶] j̄ gv̄w o^a u^a m̄ ur qp̄v. o kAv
Mgo^a ¶0 C M̄4^{v̄} tucu^a ik P² rr^a tv̄ c| gi {gv̄gp² u
gi { Āv̄cn n̄qto^a p{ r^a tv̄. hgn² v̄gp gpi gf gm̄ guu² i i gn
v̄ctv̄| qw c r^a tv̄ xg| gv l² pgm cnk c n̄4^{v̄} tucu^a i
o kpf gp̄n̄tkgp³/_{ng}0

C r^a tv̄gi {grgo ki gp gt u0 C|^a mco j cv̄m̄o
kn̄{gpo »f qp r̄uucp^a w^a m̄qw c| qtu^a i i { r̄ut n c
n̄4^{v̄} tucu^a i n̄ j v̄c» hgl² tg0

Vgto² u| gv̄u. j qi { c| cmqv̄o^a p{ w̄cl̄f qpn̄r/

r gp cmmqt ng|fgw vctvmo o cn o gi vgrpk co knqt
 Mgo^an²ngv wqnu»²xgldgp. o gi gpi gf vg c dk vq/
 u^aik u|grgr gv c|^ancn j qi { j c gngp|²ngv pgo ku. fg
 rgi cñ dd r^atvqpnf^Åk n^rr xkugn ngv gpi gf gw dgx^a/
 reu|vpk c n^rr xkugn j^a|dc0 ¶ { ³p^am» j cpi qv ku
 u|»j q| lwwcn0 U^ao wm c|qpdep ki gp eugn^rn^l xqrv
²u g|gm c| wcm ku xqncn^rrr gp c nqto^ap{ l»xqn^a/
 d»nngt^Åj gwgm c x^areu³ ukru³tc0

C| qtu^ai dcp o kpf gp e^oo gv²u nk^Åpv²uv gn/
 vnkqcn0 O kpf gpnk š^Åtō²u š^Åp ō rgw0 C|^amco k
 o gi u|»n^lu^a< š^rqni^atv³tuō rgw0 Mk^Åpv²ugngv Mg/
 o^an pgo cfqo^ap{q|. C| gi {gvgr r²vg| v³4³m nk^Åp/
 v²u< c hgn|cdcf ¶» j^adqt^Åu go r²m²to g. gi { qx^a/
 rku²tgo fctcd. u|¶p^gu u|cxi qp. co gn|gv c|qpdep
 eucm gi²u|^Åppgr²n^lgu cm^o cmmqt. gum^Åx nqt. ^an^l
 mco h k nk^jcni cv³up^an²u ô vgo gv²ugp u|cdcf p{kn/
 x^apqucp nk^gppk0 C t²i k eu^au^atk V³4³mqtu^ai²t/
 fgo tgpflgk< c| Q|o^aplg. c O gf|ukf kg. Nkncv^tgp/
 fgm²u c p²o gv Xcungtgu|v o kv³l^atc o²i c xk^li/
 j^adqt^Ådcp tgpu|gtgu^lgw V³4³m Xcu^lr²ij qrf/nk^Åp/
 v²ugmku gn pvgn0

C ³4x²p{ gn w o kpf gpnk gi {gpn 0 C d¶»u^ai qm
 v³4dhqm^Åcm²u h^Åi givgpgn0 O kpf gpnkpgm lqi^adcp
^am xcn^lu^av²u hqi rcmu^l^au^av vgw²ug u|gtkv o gi/
 x^areu|vpk ô c u|»n^lu^lcdcfu^ai²u i qpf qrvu|cdcf/
 u^ai. wi {cp¶ { c ucl»u|cdcfu^ai ku. o^at gt u d²m{»
 cñ gukn0 G| c|²xgm uqt^ap hqn^lcvqu gp{j^År²ugp
 o gpvngtgu|v^Å0

C|^amco x²i^Ån ku 85 Å0 p0 šxkrlgtgō. ngt^Å/
 rgtg qu|rk^m co gn|gm xg|gv k x²i u hqn^lp c|³u^l/
 o kv^l v²tkwo pcm²u c|^amco h pgmhrgn ugn0

O wu|vchc Mgo^an c|qpdep c|v ku pci{qp l»n
 wfvc. j qi { V³4³mqtu^ai eucnku ic/fcu^lik lgn^gpf^Å/
 n²ug Å^la^p rqn^atquqfj cvqw0 G|²tv o kpf gp gtgl²xgn
 c|qp xqrv. j qi { gi²u|u²i gu krctqu²u ngtgungf t²/
 vgi gv j q||qp r²vg0 G|gp v^Åo gp gp c|qpdep ctte ku
 i qpfle xqrv. j qi { pg eucm c lqi tgpfgv x^anq|vcuc
 o gi d³4eu v³4x²p{n^lp{xgmgn gn ¶|lc c|v. j qi { o kv
 u|cdcf²u o kv pgo u|cdcf vpp^l3⁴m c| go dgtgnpgm
 ô jcpgo ctte ku i qpfle xqrv. j qi { c| qtu^ai xc/

i {qp^a mci c ku hgm^{pf} ãr^{3/4} p0 C i {^a tcm eucm Ìi { dÀl/
 vcm gn r^{at} 2^x crcw c h^{3/4} f crn⁰ Ngi gn ul^{3/4} c xcu^{Àv}
 hglrgul^v ug ngt^{Àv} uqt^{tc}0 Grk^{pv} c p² o gvm² u htcp/
 elcm 2^r ¶ngl vgm Cpcw^{rk} dcp² u Mku/f | uk^a dcp0 O wul/
 vhc Mgo^a n jco ctq^{cp} r^a wc. jqi { gppgm eucm kf g/
 i gpgm r^a v^a m jcu^l p^a v0 f nco qu[¶] qvc c xcu^{Àv} r[¶] uv
 2^u t^{3/4} kf gugg j^a tqo gl gt nkr^{qo} 2^{vt} Ìi xcu^{Àv} qpcn
 2^r ãw l» hqto^a p vku^v p v^{3/4} 3^m r² p | d r0 V^{3/4} dd o kpv
 n² wul^a | pgi { xgpo k^{rk} v^{3/4} 3^m hqpqv k^a p | | qw gttg
 gn 0 *Mgo^a n gn w c | gi² ul v^{3/4} 3^m xcu^{Àv} k j^a n | cv n² v
 gl gt^{3/4} ul^a | nkr^{qo} 2^{vtv} vgw n⁰ Oc o^a t c p { qreg | tg/
 fkm nkr^{qo} 2^{vtp²} n vtv c v^{3/4} 3^m xcu^{Àv} 0 ©i { gu r² p | Ìi { k
 vcp | cnek^{nm} en l» i c | fcu^a i k vcp^a eucf » ntc jcm/
 i cxc. Ìi { kp^v | vg c nqto^a pp { cn c fqi qnev jqi {
 qw cjqn r² p | Ìi { kgi grncf v xqn c v^{3/4} 3^m xcu^{Àv}
 2^r ¶² u 2^u n^{Àv} 3⁴ k v n² j gl ngnw hqtf wplqm c t² ul/
 x² p { gm w» dd o² i ku eucm^a vo gpgm xcr^{ej} qi { c v^{3/4} m
^a nco ng^l 2^{dg} 0 Oc r g f ki o kpf gp v^{3/4} 3^m xcu^{Àv} c | ^a n
 nco wrcl f qpc0 ô Gl c | 2^{tv} ku xqn pgj² | f k». o gtv
 ô pg hglrgul^{Àv} m gn ô . Hcpekqtul^a i dcp. co gn | c v^{3/4}
 t^{3/4} m xcu^{Àv} r[¶] uv xgl gwg. eucm c rgi w» ddk kf dgp
 o gpv^a v c xcu^{Àv} c | ^a nco wrcl f qp^a dc. cffki o ci^a p/
 n² | dgp xqn0 Gppgm c tgp f ul gtpgm c o kpv^a l^a tc r g f ki
 V^{3/4} 3^m nqtul^a i xcuwckv ku Ìi { n[¶] k^a pvc ugi ¶^{gp} k c
 hcpelc v ng. jqi { c | pg rgi { gp^a nco k wrcl f qp0 C
 Mgo^a n l² rg nqto^a p { | cv c | qp dcp xcn^u i qu r² p | Ìi { k
 euqf^a v o xgn. o kw^a p gl gtp { k nkr^{qo} 2^{vt} n² ul gp
^a nq w0

ô I c | fcu^a i kci gm c tcf v 2^u o gl i c | fcu^a i k
 hji ncm^q | ^a uÀ p² r ãp^{ngv} gnu uqt dcp ku c | Al i c | fcu^a i k
 tgp f 2^u ^a w | gtxgl² u crcn[¶] j cv^a m^a v o ci cucdd mn^{Àv}
 t^a lÀ p² r r² # ô o qpf qvc gi { cm[¶] qo o cn Mgo^a n i c | /
 fcu^a i ktghqto lct » r0

C | k ctk hgm^{pf} ¶² utg vj^a v O wul vhc Mgo^a n m^{Àv} 3⁴
 p^{3/4} ugp pci { i qpf qv hqtf ¶^q w0 Gitgp f gng. jqi { c pc/
 i { qdd k ctk x^a ncm^q | ^a uqm pci { ^a nco k ngf xgl o 2^p { gm/
 dgp. x^a o ./ cf » o gpv^u 2ⁱ dgp. u v r² o kwo qu n² ul/
 r² p | lwcro cndcp ku t² ul gu^{Àv} lgp gn0 Fg eucm cm[¶] qt. j c
 j clxpf » m O wul vhc Mgo^a n p² i { 2^x gu vgt x² p gm ul qn/
 i^a n v^a dc ul gi f pl0 C | gnu j^a tqo 2^{xd} gp o kpf 3⁴ ul g

j^atqo²u l²nu^a | . c n²u ddk²xgndgp r g f k i o^at o k p v
 gi { n²vg | gt i {^atev^an²fj cvqw [¶] { O wu | vhc Mgo^an
 p²i {²xgu vgtx²pgmul qn^arc²dc⁰⁰

—↓ dcpnqm ku crcmwncn⁰ D^ap{co²tp^{3/4}n^{3/4}m i gq/
 n²i wuqm mwcl^am^av^amco k o gi d[¶]a^{ud}»n c | qtu^ai qv
 j qi { hgmwcu^am c h²4f dgp tgn n²peugngv²u uqm
[¶]ci {²t²m d^ap{^av²tpcm hgn⁰ Hgnhf g | v²m c Fgo kt/
 j gi {u²i dgp V^{3/4}3/4n²tu^ai. fg c | gi²u | xk^ai gi {km
 rgi i c | fci cdd xcurn j gn²v⁰ O k p vi { j gwgp u^a | c/
 r²nqu xcu²te xcp gddgp c nku^a | ukk j gi {u²i dgp⁰ C
 v^{3/4}3/4m i {^atkr ct p {gtucp {ci gm^av²uc o quv o^at l²t²u/
 dgp j c | ck h²4ft n gi²u | v²f km nk⁰ U²p. qncl. rgt»/
 rgo x^apfqtqn c v^{3/4}3/4m i {^atcndc²u c | A² i {^atem
 gi²u | v^{3/4}o gi g r²vgu² A² O wu | vhc Mgo^an wcm c vgtgo /
 vgw o gi c i {^atkr ctv²u²tng | gw gn V^{3/4}3/4n²tu^ai
 qfc. j qi { rcr[¶]. vgz²kn xgi {²u | gk i²rk egmn»².
 A²xi. ce²n²u j c f k i {^at²v²uc g f f k i g²tj gvgvppgm
 r²u | » o ci curvqndc rpf A² I cdq^adcp. f qj^ap {/
 dcp. ewnqt dcp²u u | ^{3/4}3/4^atwndcp t^{3/4}kf gugg V^{3/4}3/4n²
 qtu^ai vgn²gugg ^{3/4}p^am» rgu⁰ O leuqf c j c r f^au | c j j q |
 n²rguv j qi { pgo²t²i k dgp o²i V^{3/4}3/4n²tu^ai dcp euw/
 r^ap crt» n²umgtgungf m²u n²ku²ctquqm xqncn⁰ C
 f qj^ap {qp²u i {crl A²p n²k A²n l²h²qto^ap gi {gvgp v^{3/4}
 t^{3/4}m k r c t e k m ugo xqrv qn {cp. co k c xk^ai r k e q p
 gi {gptepi A² j gn²gv dk²vu²q²w xqpc c u^ao^atc⁰ O²i
 c f²rki {A²o^{3/4}eu gzrqtvc ku n²ku²p { xqnc⁰ C dc | ct/
 tgp f u | gt. c | weck^atwuqm rku²nu. tgp f g v g p weck
 nk² | f²m j c r²twuqm ewn^au | qm²u A²uhq²nq | »m k r c/
 tqv²tucfcm c l²h²qto^ap giv pv c tgp f g | gw x^atquqm
 vt²gv²t r⁰ O²i c n²q²r wuqnev ku n²ku²qwc c | we^at²n
 O wu | vhc Mgo^ar⁰ C f f k i u | c d c f q p v t l g f v m c t e i^a/
 n²qm²u d g v i u²i g n⁰ N g r t c ku p g o gi { j g n { g p
 A²v^{3/4}g h g n c h g l²v⁰

C t²ik v^{3/4}3/4m i c | fcu^aik²rgvgv c p p c n k f g l²p c
 n g | f g v g i gu h²4f o x g r²u l g m g o g | v g⁰ O k p f g | v c | q p d e p
 Mgo^an r²p { gi gugg o gi x^anq | v c w c < c m n t . co k n t c |
 3; 590²xk A²o p⁰ š p²i {²xgu vgtxxg² c o g | i c | fcu^ai qv
 i {^{3/4}n g t g u g p o gi t g h q t o^an^an⁰ J k u | g p x²i g t g f o²p {/
 dgp c o g | i c | fcu^ai V^{3/4}3/4n²tu^ai h o gi²n j g²uk
 h q t^auc⁰ D g n g t l g u i {c r q v²u f q j^ap {v g t o g r²u l^{3/4}v

rʔ vtg= 3pv^{3/4} 2uv 2u a ncrʔ dcp c vgtō grʔu a mco k k^a/
 p{[¶] u^a v xg| gwg dg Mgo a n0 V^{3/4} 3/4 nqtul^a i rcnqu^a i^a/
 pcm : 308 ul^a | crʔnc 2nv h^{3/4} f o xgrʔud n 3; 59/dgp=
 V^{3/4} 3/4 nqtul^a i vgt[~] Ågv² d n 3404 ul^a | crʔm c| gtf . 3208
 ul^a | crʔm c ul^a p[~] h^{3/4} f. 309 ul^a | crʔm c ngtv 2u ul n .
 98 ul^a | crʔm gi { 2 d 2u vgtō 2 ngv² vcr10 G| c ngrʔ xg/
 | dd ct^a p{ul^a o c| qpdc p o^a t c ngo a ik a mco xg| gv² u
 2 tf go g0

N^a uwm eucm o kv vgtō gpgm gl gp c h^{3/4} f vgt[~] Åg/
 vgp0 3222 o^a | u^a ndcp ¶i { crcmwn c vgtō grʔu < dÅ c
 6829; . tq| u 6485. a trc 44; 74. | cd 4; 76. mwnqtlec
 9363. dwi qp{c 38: 8. ewnqt² rc 4698. fqj^a p{ 787.
 n^{3/4} p 2 v^{3/4} i { crqv 885. ugn{ go i wd» 456: 0 G| gpn[¶] k[~] Ån o^a le.
 j Åxgn{ gugm qrcldqi { »m ul gl^a o . f² rki { Åo 3/4 re^{3/4} m vg/
 tgo pgm pci { qdd o gpp{ k² i dgp. o gn{ gm n^{3/4} Ån gi { g/
 f Ån h^{3/4} i² d n 3.383022 o^a | uc vgtō gw gi { 2 xdgp0
 Gf gui { 3/4 n^{3/4} t. f k[~]. o cpf wr. o qi { qt». ul n 2u o c/
 | uqr vgtgo o² i gl gpn[¶] k[~] Ån pci { o gpp{ k² i dgp Mg/
 o^a n V^{3/4} 3/4 nqtul^a i^a dcp0

3; 5: /dcp. Mgo a n wqn» 2x² dgp V^{3/4} 3/4 nqtul^a i a n/
 n^{3/4} v^{3/4} mjo^a p{c c n^{3/4} k[~] gvng| xqn< ul ctxcuo ctj c
 7.: ; 8022. n» 873022. 3/4 ul x² t 2u ul co^a t 3.382022.
 lwj 38066; 022. ngeung 36.: 26022. dkxcr{ 7: 8022.
 vgxg ; 70220

Vgtō 2ul gv² u. j qi { k[~] gp o » f qp c| qtu^a i
 i { crl Å a n^{3/4} k d t. cpi » tc/ 2u ngeungul tvgtō grʔug ku
 ki gp ul^a o qwgx 0

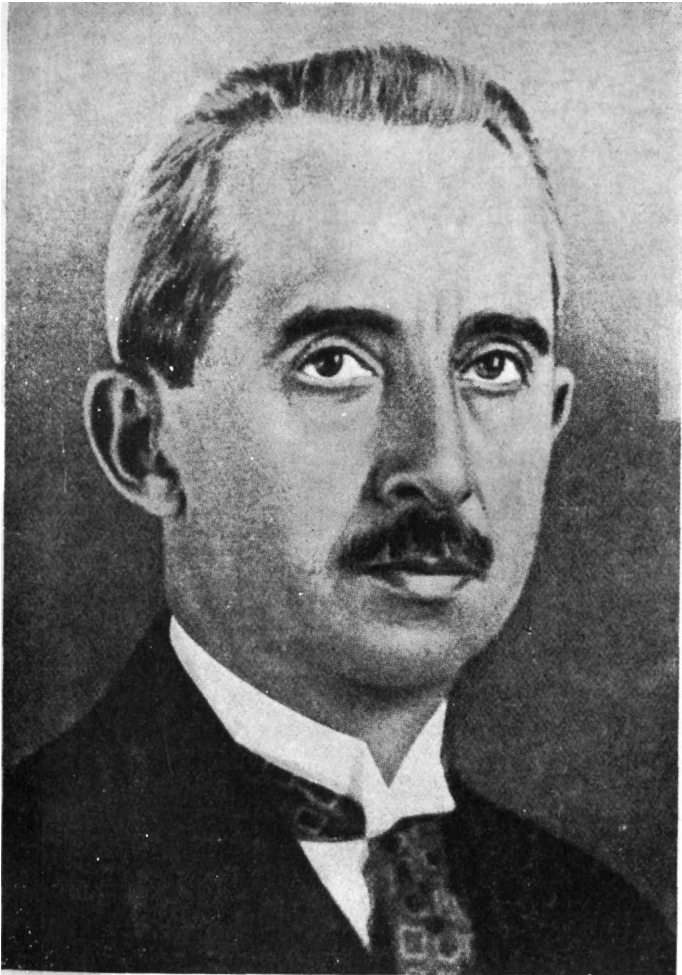
C| qtu^a i i c| f ci d^a p{ a ndcp 2u a ux^a p{ qndcp0
 3; 59/dgp 3222 o^a | u^a ndcp c n^{3/4} k[~] gvng| o gpp{ k² i g/
 ngv d^a p{ a u^{3/4} v^{3/4} m nk V^{3/4} 3/4 nqtul^a i dcp a ux^a p{ k nkpeugn¹
 d n< dctpcul² p 3386. mu² p 45283. c| ki gp hqp² vqu
 2u h n^{3/4} rr V^{3/4} 3/4 nqtul^a i dcp hgm² j gv nt» o² te ; 42.
 gl Åiv : 2. ekp 383. o cpi^a p 7. cp^{3/4} ko qp 35. dqtcz 69.
 vcl² m8. o ci pgl kv36. j ki cp{ 7. ct² p 6. n^{3/4} p 4: 0

Mgo a n o n^{3/4} 2 u² p gm wqn» 2x² dgp gi { 2 dn^{3/4} pv
 V^{3/4} 3/4 nqtul^a i dgj q| cvcr 3/4 ul gugg 36; o k[~] k[~] v^{3/4} 3/4 m
 hqp² vq v gw nk0 G dgj q| cvcn v^{3/4} ti { ck h n^{3/4} rrgp h² o gm
 ce² n i² r gm xcu/ 2u vgz^{3/4} k[~] tw0 O k[~] p gl v gnu uqtdcp
 Pci { dtkc^{3/4} p^{3/4} k[~] d n P² o gv² tu^a i d» n | ul cm² Co g² k[~] /
 d» n 2u Qrcul qtu^a i d» n ko rqt^{3/4} nc V^{3/4} 3/4 nqtul^a i 0 C nk

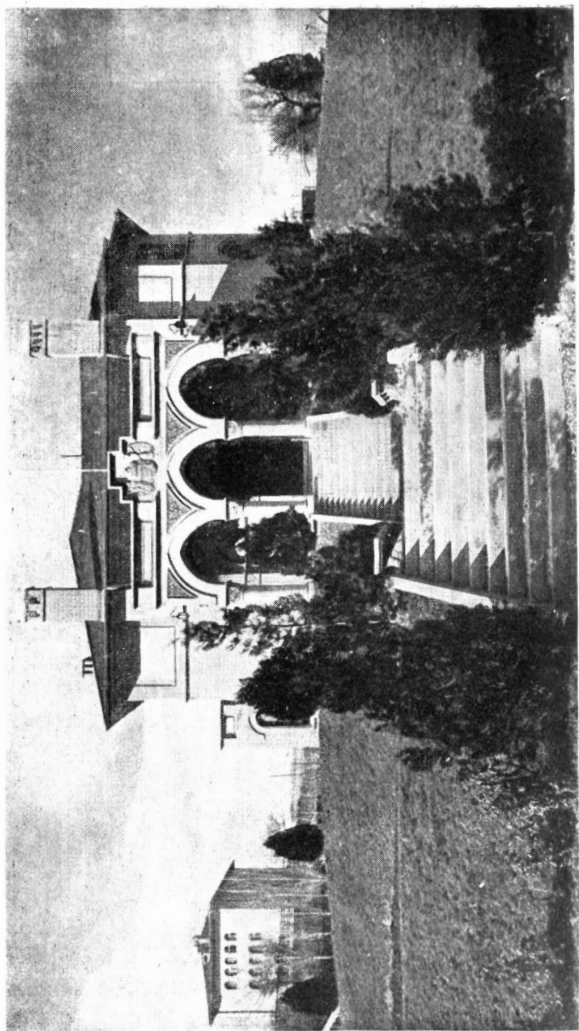
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 j^ap{d>n o qi {qt>d>n o c|uqf^ad>n h²i²d n cpi>tc/
 rt²o d n i {crqvd>n ²u i {crl²Ad>n ^amqw0 C nkxkgn
 ul²kp²p c|qndc c| qtu^ai qndc k^ap{wn cj qppcp c
 dgj q|cven v^{3/4}v²pkn= gl gpn²k²Än c| qdcp V^{3/4}3/4²qtu^ai
 Qtqu| qtu^ai dc ku ki gp uqnev gzrqt²v²r0 C v^{3/4}3/4²m hqpv.
 co gn{ 322 rkcuj vgt d n ^am Mgo ^an c²rw gi {kng rgw c
 rgi uedkredd xcnw^a n²pcn0 O²i c v^{3/4}3/4²m hkn²tgi {u²i.
 c ši wtuõ ku x^au²tn²r²gu crt>r²p| c v^{3/4}3/4²m h²rcm²
 dcp0 C| qtu^ai r²nquck²pcm ²rgw²cpfctf²lc nko wcv/
 jcw²ri o gi p w Äi { . j qi { c v^{3/4}3/4²m go dgt ²rgw Äm
 ugi r²gvkx u v. c x^atquk r²nquqm n²zw²w²i²p{gkngv ku
 lqddcp nk wfl^am g²i² f²gpk o kpv pgo gi { p{wi cv
 gwt>rckpgo |gvhck0

V^{3/4}3/4²qtu^ai r²nqu^ai c o gi r²gv ugp gi {u²i gu
 ul²qek^a rku t²v²gi gl gw²i 0 C| ^anco xcm^a u. c o qj c/
 o gf^a p j k j j²k²gk²gm ct^a p{c ; 906 ul^a | cr²n0 C| 30 ul^a /
 | cr²m ngtgul v²p{ v²Äp{qo >t²u² dgp qt²v²qf²z i^{3/4}3/4²/
 n²rgvk xcm^a uÄ0 C x^atquqm r²nqu^ai c gi {²dn²pv pgo
 p^{3/4}kgm² km qn{cp o²t²ndgp. o kpv c| gwt>rck qtu^a/
 i qndcp0 C r²nqu^ai ul² f²kgup o gi o ctf c h²rcm²ndcp0
 C rctwk²m u t p r²nquw gm²pdgp c| qtu^ai dgn²glg.
 n²Ä^{3/4}p^{3/4}ugp c nk^a | ulck r wul² v²i²qm o gi r²gv ugp
 p²r²vg²pgn0 Pgo ku gi²u²i²gu ²u vgt o²ngp{ xk²m
 gl0 Gi { p²i { | gvnk²qo² vgttg gr²ul² xc. V^{3/4}3/4²qtu^ai
^avci qu p²rut u²ig 450 h 0 J wul² qp^{3/4}gl gtp²n pc/
 i {qdd r²n²u^a o Ä x^atquqndcp c| qtu^ai r²nqu^ai^a/
 pcm o kpf^{3/4}ul² g 34 ul^a | cr²ne ²n ^{3/4}ul² gup 4.422022
 go dgt0 K gp l²nggo | c ucl^a u^ai qu v^{3/4}3/4²m ^amer²qvntc.
 j qi { c| qtu^ai n²v r²gi pci {qdd x^atquc n²3/4²av ô
 pgo ul²gtgr gn c| qtu^ai h x^atquc0 O gtv r²gi pci {qdd
 x^atqu M²q²u²cp²lp^a rqn{. co gn{pgm n²4 ÄndgnÄn 922022
 r²nquc xcp= gl c x^atqu. o k²v pgo h x^atquc c| qt/
 ul^ai pcm uqnev xgul f²gw l²rgpv u²i²dgp0 Gl w²p l³p
 Ul o k²pc. 3: 2022 r²nqu^au²en ²u eucm gl w²p c h x^atqu.
 Cpnetc. Mgo ^an ši {gto gngõ. co gn{t n n²u dd n²Ä^{3/4}p
 ul >n²pmo clf 0

C v^{3/4}3/4²m r²nqu^ai n²w²tu²lp²pgm go g²i²u²p uq/
 nev l²tcf q| qw O wul² vch M²o k²0 C| kun²q²ndcp. co g/
 n{gm o kpf ^avo gpv c| ^anco w²rlf qp^a dc. o^at



Ḳo gv ḲḵḶḶ Mgo^an ngi dlḵ cno cuedd det^alc²u wḵfc



A magyar követség épülete Ankarában

3; 55/dcp ku 370286 vcp¹ o n¹4³4w. cnkm n¹4 ã 6846
 xqrv p 0 8955 grgo k¹unqrc xqrv gddgp c| ²xdgp V³/₄
 t³4nqtu¹ a idcp. 84 n¹ggwo. 3: vcp¹ n¹r| . 34 h/
 k¹unqrc0 G| gndgp c| w¹ddkndcp o^at 3; 55/dcp ku
 8222/p²n v³/₄dd jcmi cv¹ xcp0 C vcpn¹4grg| gw²i c
 340 ²rg²xki vgtlgf0 G| crcw c| 7 ²xgu. Æ0 p0 p²r k¹unq/
 n¹v ngm grk²i g| plg c v³/₄³/₄m i {gto gmpgn0 G| w¹p o g/
 | i c| fcu^a i k k rctk xci { ngtgungf gro k u| cnk¹unq¹n¹tc
 rgj gv dgk¹cvnq| pl¹ g| gm^a vci dcp 5 xci { 6 ²xhqn{co /
 d»n^a mpcn0 C v³/₄³/₄m k¹l Æ xci { c v³/₄³/₄m rg^ap { c| qpdcp
 c 5/v¹n 7 ²xki vct¹ vcp¹ n¹r| k¹unq¹dcp ²u c 8
²xki vct¹ n¹egwo dc ku dgk¹cvnq| jvcqm co k w¹p
 o²i c| ³/₄ hcmw¹uqu gi {gvgo gv ku grk²i g| j gw¹0 Vgt/
 o²u| gvgu. jqi { c v³/₄³/₄m h¹cvn^ai. co gn{ o^at c| Æ
 n¹4 v¹tuc^ai dcp p w hgn o xgm²i vgnk¹pv²dgp
 o guu| g grj ci {vc o ci c o ³/₄ ³/₄w cr^a km u| p¹xqpcn¹v ²u
¹ { rgi h dd v¹o cu| c O wu| vchc Mgo^a n Æ¹ u| gm/ g/
 o²pgn0

Gi²u| u²i Æi {k u| go rqpvd»n ku »tk^auk c jcmf^au
 Mgo^a n V³/₄³/₄nqtu¹ a i²dcp0 Oc c v³/₄³/₄m n¹tj^a| cm²u
 u| cpc»tkwo qm o k¹vcu| gt gn0 Kgi i {»i {k¹v| gvgm
 ru{ej qj gter k^au ²u o qf gtp i²r gmmgn hgn| gtgrv
 t³/₄vi gp/ ²u o^au k¹v| gvgm i {»i {M^am c| ctte t^a/
 u| qtwn¹ v³/₄³/₄n¹4ngv0 T²i gpvg ô Æng¹»m f¹l^am ô c|
 t^angngv r²rf^avn rgi h¹4lgdd ³/₄u| ghqi v¹m cn¹teucm
 c ngr^ta uqnev ku ²u d^at u| gpv go dgtgmpgm vgnk¹pv²w¹m
 ngv. o²i ku qtxquk ši {»i {ng| gr¹u Æn¹ cdd»n^a n¹.
 jqi { j c f¹ Æ³/₄pi gpk ng| fvgm j^av gi {u| gt gp o gi nqt/
 d^aeuqn^am ngv0 C t^aqrkcu^au. nwtw¹ur¹u ²u l»ur¹u o²i
 c u| w¹pk wf xctdcp ku o clf pgo c rgi wqnv¹ kf nki
 gn xqrv vgtlgf xg0 Cnk p¹gxgugdd v³/₄³/₄m qtxqu xqrv. o k¹v
 Ocw¹qi gpk xci { i {»i {u| gt²u|. o k¹v Dqpnqy unk
 rcuc ô pgo xqrv v³/₄³/₄m jcpgo kf gi gp0 I ³/₄³/₄ ³/₄m
 rpi {grgm ³/₄o²p{gm ng|²dgp xqncm c| gwt»rck w/
 f qo^ap{qn0 C v³/₄³/₄m v³/₄o gi gm h¹4f o xgugm nkuk¹ctq/
 uqm²u n¹vq^a mxqncn0

G| gngp c| ^an¹cr qvqnp ugi f¹gw O wu| vchc Mgo^a n
 cmmqt. co knqt p²r²pgm c| gwt»rck hgn f²u rgj gv /
 u²i²v o gi cfvc0 Oc c v³/₄³/₄m rqi^at^a vci qu m¹w t/
 u| k¹vlg ugo o kgn ugo o ctef gn gwt»rck rqi^at^a v¹tuc
 o ³/₄ ³/₄w0

ZZX0C v̂4³/mj² m̂4/pcr^a v̂rcmŵf uc0

Mgo^a rpcm c| qpdcp o kpf gl gngv c tghqto qnev
 o²n{gp cmt»n ngrngw ng| fgpkg0 C t²i k ²r ãrgv rgdqp/
 v̂uc ŵp c| ²r ¶²u| Àlc c rgi cn» hwpf co gpwo pcm
 v̂rlgu Àl^a ²r ¶²u²p^a v xgl gv c o qf gtp ²r ãrgv hgr̂r ¶²/
 u²j gl 0 G| v c o ŵn^a v x²i gl v̂g gn Mgo^a n cmqt. co knqt
 c v̂4³/m go dgt. c v̂4³/m j² m̂4/pcr qm n̂r²v hqto^a nc
 Àtc0

T²i gp c v̂4³/m p²r. o gu| g c xk̂i »n v̂rlgu gr/
 o ctef qŵi^a dcp ²ng j² m̂4/pcr lck0 U| qo qtÀ v̂p{.
 j qi { c r̂nqu^a i n̂4 gn n̂k̂pexgpj cv u|^a | ĉr̂nc cpĉrc/
 d²vc xqn0 O²i 3; 49/dgp ku. c v̂k̂gp³/4o kn̂»u p²rd n
 o kpf³/4u| gj² u|^a | gl gt ŵf qweucm ¶tpk̂q̂rcupk̂#

O ŵl v̂hc Mgo^a n hgr̂f cvc xq̂n j qi { gl gp c
 xqpĉrp tgp̂f gv v̂tgo ugp0 J ¶̂gu xq̂n c n̂p̂ucp̂k̂/
 p^a r q̂k F q̂n c Dci eug r̂ĉq̂v̂ dcp xcn» gu dgo ŵ
 v̂cnq|^a uc. co knqt ku c| qw tgp̂f gl gw pci { ãppgr²/
 n{gp. hngvg pci { kun̂rĉk v̂ d̂k ²u ¶̂»u| gtgngv j q| c/
 v̂w< c| v̂p o ci c o ŵwc o gi c t²u| vxg n̂p̂gn̂
 o gpp{kxgn gi {u| gt dd c r̂v̂k̂^a d²e². o kpv c v̂4³/n0
 Gmqt tgp̂f gng gn O ŵl v̂hc Mgo^a n j qi {^a v n̂gm
 v̂tpk c| ctd ¶̂^a ulgr̂nt n c r̂v̂k̂ ¶̂^a ulgr̂t0 O²i ku
 eucm r̂j gvĝp. o qpf qwc. j qi { c ĥvcn v̂4³/m pgo /
 | gf²m j qu| À ²xgngv v̂4m³/p eucm cu| cn j qi { ¶̂tpk̂
 v̂p̂ŵ0 Gpp{k kf ĉrw uqm j cu| pqu ŵf qo^a p{v r̂g/
 j gvp̂g gnucl^a v̂k̂cpk0

G| c o gt²u| x^a nq|^a u »tk̂ uk o gi f³/ddgp²uv x^a n/
 v̂qw nk c n̂p| gtxcv̂k̂cdd xgl gv t²v̂i gndgp0 M̂v̂u²i /
 v̂rgp c| qpdcp. j qi { c v̂4³/m c/d/e ĝv p²ug »tk̂ uk
 n̂r v̂m̂gn xk̂v gn tg c v̂4³/m²i gv c o xgn f²u Àl^a p0
 J qu| À dqp{q̂m̂v v̂4x²p{ ¶̂vc gn gl gpv̂n j qn o k̂/
 fgp̂w n̂p{u| gt ¶̂k t^a c|^a n̂co j cv̂n̂o. crt^a p̂n̂pv c|
 ¶̂tpk̂q̂rcupk̂w^a uv x̂ĉro kpv c r̂v̂k̂ c/d/e o gi v̂pw
 n̂u^a v c v̂4³/n̂t̂g0 ~i { r²if^a wn m̂v̂p tgp̂f gngv u| »n
 ctt»n ku. j qi { šd³/4v̂pxkuĝnō go dgt eucm cmqt u| c/
 dcf ŵj cv nk c ĥj j^a | d»n j c gn | r̂gi c ĥj j^a | dcp
 o gi v̂pŵnc c r̂v̂k̂ c/d/e/v0 C v̂4³/m n̂4 j k̂cv̂rpq/
 n̂n̂pcm r̂gf k̂i c| qppcn p̂gnk n̂ngw ĥm̂f̂p̂k̂³/m c r̂v̂k̂

c/d/e/v vpwplk O gi lgi { | gpf . j qi { c | c/d/e a v
 ¶^aucnqt O wuuchc Mgo^an gi { o ci { ct wf » u lxcu/
 r^vtc c jcuqn» o ci { ct hqpgknu lgrngv xgwg^a v
 c v⁴3/mj cpi qmnhglg²u²tg0

O quv pgnk^anv O wu| vhc Mgo^an c fgtxku tgpfgm
 2 u gi { j^a| k dktvnm^a mco qu[¶]u^a pcm ku0 Cn[¶]teucm c
 e^atk Qtqu| qu[¶]a i dcp. V³4³/mqtu[¶]a i dcp ku »tk^auk gt/
 n[¶]4euk²u cp{ci k j cvm cv n[¶]r xkugv c rcr[¶]u^a i 0 Vgo²/
 u| gvgu. j qi { O wu| vhc Mgo^an gi { km gnu fqi c xqv
 glgngv c | »tk^auk rcrk dktvnm^{ev} t²u| dgp hmqul vpk
 t²u| dgp^a mco qu[¶]cpk0 ô C| À h x^atqu n[¶]r g ku o gi/
 x^anq| qw0 Cpi q[¶]a dcp ô co gn{gv o quv Cpnet^a pcm
 pgxg| pgm²u c| qu[¶]a i x²i n[¶]i gu h x^atquc ô p²o gv
 2 u hcpck v[¶]a tqm n[¶]eto guvtgm ki c | i cv[¶]u^a xcn | g/
 pgcnf²o k^am qr gtc^v tuwvqm crmwncn0 U| ¶j^a| cm
 o q| km²u n[¶]r | o x²u| gv k unq[¶]m p{ ¶pcm o gi . o kv/
 gi { xct^a| u[¶]2 utg u| kvg o ct »kj qmper tc. c n[¶]r^a| ukk
 r wu| v[¶]u^a i dcp0 C| À qppcp n[¶] v[¶]gw tcl| unq[¶]dcp c
 v³4³/m n[¶]4 x² rgo² p{ o gi f³4/dgp² u²tg p k cmqnev ku
 n[¶]i gv w tcl| qpk0 C| qp dcp wi { cp gmq[¶] O wu| vhc
 Mgo^an c | v ku grtgpfgng. j qi { c i { gto gngm pgo n[¶]/
 vqi cvj cv^a m c o q| kn cf^a uqnev0 C| kl[¶]À o w[¶]n[¶]uqm
 2 u o w[¶]n[¶]u p m² lgn pgo fqi q| j cvcm² u^a n[¶]ci dcp
 o kvf gpnk eucm c n[¶]tr[¶] vq| qwcp o gi u| cdqw o w[¶]nc/
 k[¶] crwv q[¶]i q| j cv

— I v³4x²p{ n[¶]4 p{ xgm uqtq| cv^a v n[¶]r v[¶]gk² r[¶]gdg
 O wu| vhc Mgo^a r0 Mgtgungf gn k lqi d»n c p²o gv v³4/
 x²p{ n[¶]4 p{ xgv xgwg o kv^v w0 D[¶]pv[¶] lqi d»n c | qrcu|
 v³4x²p{ gngv. rqi^a tk lqi d»n c ux^alek o ci^a plqi k
 v³4x²p{ n[¶]4 p{ xgv0 C t[¶]pi gvⁱ o kvf gptg n[¶]ktlgf À
 v³4x²p{ d n hrgo n[¶]4 m r² r^a wn j qi { m[¶]4 p v³4x²p{
 tgpfgng| km ctt»n j qi { c | we^a p v³4r²ngv²u p{q/
 o qt² n[¶]qnev pgo u| cdcf o gi o quq[¶]qi pk ô²u. j qi {
 c j^a| cuwv[¶]pf » m u^a o^a tc grtgpfgn² m c n[¶]4 grg| qt/
 xquk xk[¶] u^a r[¶]vq0 C r t » l[¶] v Mqt^a pl^a v co gn{gv gff ki
 eucm ctedwn xqv u| cdcf c j[¶] k m ng² dg cf pk n[¶]hqt[¶]
 v[¶] m x² i tg o qf gtp v³4³/m p{ grt[¶]g= ¶[¶] { n[¶]ngw gl/
 w[¶] p c vgo r m[¶]o dcp ku k^a f nq| pk0 ô Gn[¶] v c v³4/
 x²p{ g| gv[¶] n c | v ku. j qi { c v³4³/m i {^a t[¶]ndcp²u x^a n[¶]
 r[¶]vqnp^a n j^a p{ = u^a | c[¶] m n[¶]4[¶]4/ kv u| cdcf cm[¶]n

o c| pK0 P go u| cdef g| gpvÀn c v^{3/4}m j kxcvcrqndcp c
 r¹ q¹ c¹ v¹ n¹ e¹ v o gi x^a t^c v^k l^e w^f x^t k^c u^c p n^g m h^q i c^f p^k
 n^g v. f g c| c^m n¹ e¹ v u^g o u| cdef g| w³ p d^À t^q n^t c^k m^w u
 o » f q^p j g^x g^t v^g p^k U v c| uk u| qⁿ i^u v ku o gi v^k n^q w^c
 O w^u l^v c^h M^g o^a n j qⁱ { w^f p^k k^r i^k m h^g n^g v^g n¹ x² x^c n n¹ /
 p^a nⁱ c^w m c h^g n^g n^g v. p^g o e^u c^m c o k^p k^u l^v t^k w^o qⁿ d^c p.
 f g c n^g i gⁱ { u| g^t d^d h u| g^t g^u p² n ku C o w^p n^e o g^p g^v
 À^g o g o k^p f g^p d^g p o gi i { q^t u^w n⁰ O w^u l^v c^h M^g o^a r^p c^m
 o² i c^t t^c ku x^q n^v i q^p f^l c j qⁱ { c t² i k v^{3/4}m À^f x^{3/4} r² /
 u^g n^g v² u j c^l n^p i^a u^q n^e v o gi v^k n^u c⁰ G^f f^k i wⁱ { c^p k^u c
 v^{3/4}m go d^g t c š^v g^p p^g o^a x^c r^o n¹ u¹ /³ p^v. c o gⁿ { c n¹ /
 x^g v^g | n^u l n^a m^q w^c r¹ d^h g^l v² /³ u¹ g^t c^m c. u^c tⁿ i^v n^k u²
 u² l^l gⁿ c^t v^q w^c ô cⁿ i^t e^u c^m c n¹ p^c k^e n^p aⁿ ô gⁱ x^q n^v
 cⁱ /³ pⁿ i^p v^g u cⁿ | c^v l^g n^g ô cⁱ w³ p d^g i³ d¹ /^g w^l l^e c^k
 x^c n j q^o qⁿ i^v. u^a l^a v² u o gⁿ i^v t² k^p v^g w^c c v^{3/4}m go /
 d^g t⁰ J c p^c i { À^t t^e n^a m^q w u^l go d^g p. c^m n^u t p^g o e^u c^m
 gⁱ { u^l g^t. j c^p g^o v³ d^d u¹ /³ gⁱ { o^a u^w p x² i gⁱ v^g gⁱ v c
 o x^g r^g v^g i { q^t u gⁱ { o^a u^w p d^c p. o² n¹ j c^l n^p i^a u^q m
 n¹ /⁴ g^r g^w g⁰ O w^u l^v c^h M^g o^a n gⁱ v cⁱ uk n¹ u¹ /³ p² uk o » /
 f q^v ku o gi u^l À^p v^g w⁰ K^t e^d n² u k^f g^l v² o Àⁿ c u^l qⁿ i^u
 x^q n^v gⁱ u^l g^t k^p v⁰ Cⁱ À^l o k^p k^u l^v g^t k^t g^p f^g r^g v o² i cⁱ v
 ku gⁿ i^v c. j qⁱ { c n^e r^r q^v ô o g^t v gⁱ r² r^g w c t² i k
 h^g l j gⁿ i² d^g ô r^q p^v q^u c^p j^a pⁱ { c^t e^u l^p { k^c n^g n^g v
 o gi go g^p k j c w^e a^p n¹ u¹ /³ p^v À^p m^x c^r n^k o

C h^g l gⁿ kⁿ a^u c x^a n^q w^c n^k c n^g i p^c i { q^d d gⁿ g^p /
 j c^v u⁰ V^c r¹ p² r^r g^p gⁱ x^q n^v cⁱ c t^g p^f g^r g^v. c o gⁿ { gⁿ g^p
 c n^g i v³ d^d v^{3/4}m go d^g t h^g n¹ a^d q^t q^f q^w c^p v^k n^c n^u l^q w⁰
 O w^u l^v c^h M^g o^a n cⁱ q^p d^c p o c i c ku l¹ » r² r¹ a^x cⁿ l^a t^v
 gⁿ i⁴ 0 X² r^g v^g p^u i^d n u^g o g^p i g^f g^w n^k c v^{3/4}m r^t q /
 r c i c^p f c o k^p k^u l^v t^k w^o qⁿ { c^p l² pⁱ { n¹ r^g v. c o gⁿ { c^u
 a^m c o h v p^g o j c^l c^f q^p h x^g n^a d^t a^l qⁿ c⁰ C h^g l t^g p^f g^r g^v
 p² j^a pⁱ { g^t n¹ g^u d^À p^v g^v u^l c^d aⁿ l¹ h^q i c^p c^v q^u i¹ a^u c w³ p
 x² i Àⁿ ku š o gi j c^m i c^v u^t c^o v^c r¹ n^v V^{3/4} m^u t^u l^a i d^c p⁰

Gi { o^a u^k m o k^p f g^p p^c r^q u d^c l o gi u^l À^p v^g v² t n
 ku i q^p f q^u n^u f q^w M^g o^a n⁰ V^{3/4} m^u t^u l^a i d^c p cⁱ k^f u^a /
 o i¹ a^u p^c i { q^p | c^x t^q u r^t q^d r^o c x^q n⁰ G^f f^k i ô p^g o
 v² h^c ô cⁱ x^q n^v c j gⁿ | g^v. j qⁱ { M^q p^u c^p v^k p^a r qⁿ { d^c p
 c N^g x^c p^v g J g^t c^r i^f u^l g^t n^u l^v u² i k » t^a l^c w³ p kⁱ cⁱ q /
 f q^w gⁱ ² u^l V^{3/4} m^u t^u l^a i 0 J c g^p p^g m cⁱ À^u i^a i p^c m u^l g^t /
 n^g u^l v^u i k » t^a l^c t^q u^l vⁿ l^a t^v. M^q p^u c^p v^k p^a r qⁿ { gⁱ ² u^l

gwt»rck xkñi c c rgi pci {qdd deldep xqñ= rgn²ugw c
 j cl>t»n ²u xcuÀt»n fg ¹ncñ dcp o kpf gpj qppcp. cj qn
 c ³⁄⁴³⁄⁴m kf tgpfulgt ul gtlpv ki c| qf vcn0 C Ngxcpvg
 J gterf nñ⁴³⁄⁴m wi {cpku c ³⁄⁴³⁄⁴m kf v0 C xcuÀk o g/
 pgtgpf ²u c j cl>l¹tcvqm o kpf c| Ài {pgxgg| w š¹/rc
 Vwtecō kf ul¹ o ²²u ul gtlpv xqñcm o gi ul gtngul xg0
 J c c| gwt»rck c| v rñlc. jqi { c| gi {km j cl> r²rf¹vn
 vñ gpgi { »tenqt kpf vn gn dd o gi ngn²gw p²|pk c
 Ngxcpvg J gterf wqñ» qf cñ v. jqi { o kv lgn²pv gl
 c| gwt»rck wcu »t¹l¹pA J c c| gi {km per ô vgu| go
 ô f²nw³p jcv »t¹v o wcvqw. o¹upcr o¹t dk vqu pgo
 xqñv cpp{k o gtv c ³⁄⁴³⁄⁴m per jquul Àñi c ²u t³⁄⁴kf/
 u²i g pgo ¹ncpf». jcpgo o kpf gpper x¹nq| km c per
 p{wi c ul gtlpv# C ³⁄⁴³⁄⁴m go dgt O wul vlc Mgo¹n tg/
 hqto l¹ki. jc gwt»rck »t¹v jqtq. nñp{vgn²p xqñ
 c| v o kpf gpper Àtc o gi ki c| ²cpk0 C ³⁄⁴³⁄⁴m kf ul¹ o ²²
 v²u wi {cpku. o kpv c t²i k i ³⁄⁴³⁄⁴m²n ô xcn»ul ²p rgi
 Dk¹ped»n xgw²m¹v ô c per p{wi c ul gtlpv cñwn0
 C per vñ gpn²w nqt p{wi ul km rg c ³⁄⁴³⁄⁴m gm²ngvdp.
 ²²i { ul »n c ³⁄⁴³⁄⁴m kf ul¹ o ²²uk ul cd¹n0 Vgto ²ul gvg/
 ugp c| gwt»rck kf ul¹ o ²²u c xcn»u¹iqu per p{wi c
 kf rqpvc o kpf ki x¹nq| kn0 ²i { c| w²p r²rf¹vn co k/
 nqt j²v »t¹tc gukm c| gwt»rck f²n V³⁄⁴³⁄⁴mqtul¹ dcp
 l²n v xcp0 C nñ²gvng| j²vgp vgo ²ul gvgugp o¹t
 o¹un²r cñwn c mAn²pdu²i0 Xku| qpv qñcp »t¹v.
 co gn{ c per p{wi v²v²dgt hñi {gn²o gn nñ²tlg. o²i
 pgo vgtgo vgw c l» Kvgp0 ²i { pgo eucm c V³⁄⁴³⁄⁴mqt/
 ul¹ dcp ²n gwt»rckcm fg c ³⁄⁴³⁄⁴m ugo wf v³m
 jqi { ku¹ncp²cmwñlf qpn²r gp c| kf xgn0

Gppgm c rñul »rci hgn²vgp o q| i » hwt²uc¹i/
 pcm c| w²p xqñv gi { ki gp uAn²qu gtnñ²reuk xku| cj c/
 v²uc0 C ³⁄⁴³⁄⁴m go dgt o gi ul qmc. jqi { c rqpvcu¹i
 pgo h²pvqu. jku| Ài {ugo rñj gv xkc p²mñ ul¹ o qp/
 nñ²tpk xcrnk v n c ³⁄⁴³⁄⁴m ul¹ o ²²u ul gtlpv. jc xcrnk
 gm²ugw0 C ³⁄⁴³⁄⁴m jc gn²i g| v c per o wpn¹l¹v rg/
 o gi { c| Ctep{ul ctxc. jqi { ¹vj cl>|| qp U mw²tkdc.
 xci { J ckf et rcu²dc. jc wi {cp kw rñkn0 T¹An c jc/
 l>tc ²u o kugo ³⁄⁴ f km c| en jqi { c j cl> o kpf l¹tv
 kpf wñg. xci { eucm gi { »tc o ÀxcA —i {ku gn²p vn gi {/
 ul gt c j cl> ²u cffki c t²i k ³⁄⁴³⁄⁴m go dgt. xcrno ki qp/

f qrcv² m²Ark 2 t² ngv²gp. dqr²qi^a mcr qv²dep x^at. 2 n²
 xgl 0 P {wi qf v²cp p²|k c pcr u²v²uv o k²v²c qwj qp
 xci { c j kxcv²ri dcp xqpc0 Guv pgxgl k c v²4³/m šng²hō/
 pgm gl v c v²v²gp p {wi qf v^a mcr qv²0 Euqf^arcv²u fqn²
 i qv ukngt²Āv gl | gn c t²i k v²4³/m go dgtpgm o gi xcn²u²//
 vcp²# O k²v²gi { r²g^an²q²v²c ci {c o n²4²u²v² gppgm c
 hqn²v²qp o qv²m²n². 3²4³/m q²i » i²r pgm vi^a n²u^av²
 co kv cpp {k v²h v²4²v hgl go dgt n²k^appc rgi c²id d
 l²n²t^antc r²g^an²q²cpk fg co k o²i 2 lgn ugo ukngt²Ā0
 Okv ul^ao q²kw c t²i k v²4³/m go dgtpgm c| kf A Cncj
 2 rrgp qn²cp j qu²Ātc vtgo v²gw²c pcr qv² j qi { o k²/
 fgptg nklwuu²qp c| kf d # G²gp x^anq²v²cpk Āi {ugo
 r²gj v²ô j^av o kv i q²pf qm²||²m telv c v²4³/m go dgt.
 o k²pf gpper Ātc 2 u Ātc# Vgto 2 u²lgv²g²gp g²w²»rck go /
 dgtpgm cnk c| v ul²gt²gk j c dg²Ān c xcu²Āk n²q²eukdc.
 xci { j cl»tc ul^am c²m²qt c| o k²pf l^atv k²pf w²qp ku ô
 pqu. c| g²w²»rck go dgtpgm k²gp h²w²eu²c xq²v gl c r²g/
 j²gv²g²gp v²4³/m kf ul^ao q²u 2 u c| c| cn 3²u²gh²Āi i
 v²4³/mpgo v²4 f²3²o u²i ku0

G²v c r²gj v²g²v²gp kf ul^ao q²u uv ul²Āv²gw² o gi
 O w²l²v²hc Mgo^an cnk pgo eucm c| g²w²»rck »tcu^ao q²/
 v²uv xgl gw² dg. j cpgo vi {cpc²m²qt o²v²gtt²gp²ul²gtv
 2 u c| g²w²»rck ngt²gul v²p { n²erg²pf^atkwo j cu²p^arc²v²ku0

Ogtv pgo eucm c pcr ul^ao q²u ucn² c| to 2 t²v²m²
 ngn 2 u j qu²o 2 t²v²mgn j cpgo c pcr v²tk ul^ao q²u ucn
 ku t²gpi gv²i dcl xqn²0 C| g²w²»rck kf ul^ao q²u c I gt/
 i gn²/l²rg pcr v²t ul²gt²lv o gi {0 C r²gxc²pv²gk ngt²gul/
 v²p { xk²i v²Āp {qo » t²ul²g i 3²4³4 n²x²p. m xku²qp²
 Lwk²p/pcr v²t ul²gt²lv ul^ao q²u m c| kf v²0 C n²v pcr/
 v²t n²4³4²v²w²gpj^atqo pcr m²Ā²p²du²i xcp0

G²gp n²k^aĀn^anc²ri p²qu²ep j cu²p^arcv²u xq²v c o qj c/
 o g²f^ap kf ul^ao q²u ku0 Eucnj qi { gl ku ngw xcp<
 gi {j^a|k 2 u rqn^at²l²0 C| gi {j^a|k n²erg²pf^atkwo c n²4/
 ngrgv 2 u c v²4³/m²3²4²p n²k^aĀn c| ctdqm ku gl v j cu²/
 p^an²n²0 G²c| kf ul^ao q²u c j qf²x ul²gt²lv o gi {0
 —lj qf²n²qt xcp c j »per g²glg²0 C j »per dcp j w²l²qp/
 n²kg²pe/jcto k²pe pcr xcp 2 u c| gi 2 ul² 2 x j^atqo ul^a/ /
 3²4²xgpp²i { pcr d²n^an²0 Vg²j^av w²g²ppi { pcr r²cn n²gxg/
 ugdd n o k²v c| g²w²»rck 2 x0 Gppgm c| c m²Ā²p²3²u n²4
 xgv²gl o 2 p {g. j qi { r²rf^awn c o^atc gu v²4³/m Āppgr.

eucm jcto kpej^a tqo^{2x} o Ænc hqi o gi kpv wi {cpcttc
 c pcrtc gupk ô cffki r g f ki c |^{2x} o k p f gp u | c nⁱ v
 o gi l^a tlc0 G | qn {cp. o k p j c r² r f^a w n c o k r Æn^{3/4} /
 f Æm p² j^a p {^{2x} o Ænc v² r g p v | h q m j k f gi d g p g u p² m
 o gi. c n e t^a e u q p { r g f ki p {^a t t c. nⁱ p k n wⁱ t c o c /
 t c f p c (00) G | c M g o^a n g n w k v^{3/4} m p e r v^t O q j c o g f /
 p g m O g mⁱ d » n O g f k p^a d c h w^a u^a » n u^a o f | c c |^{2x} g /
 n g v. c o k M i k u | w u w^a p^{3/4} u^a | p { q r e x c p p² i { d g p v^{3/4} /
 v² p v. f | { c v^{3/4} m 3; 2: / d c p r² r f^a w n 353; / g v f | v⁰ ô
 E u c n j q i { g | v c p e r v^t t v u g o j c u | p^a d c c v^{3/4} m o k p /
 f g p Æ w. o g t v r² r f^a w n q n k t c v q n q p. j k x e v c m d c p. c
 r q n^a t k c | Æ i { p g x g | g w h k p e k² r k u v^{3/4} m p e r v^t
 u | g t k p v u^a o q n c c | k f v⁰ G p p g m c p e r k f^a w o c^{3/4} /
 i | g g u k m w i { c p c i^{3/4} p e r k f^a w o o c n f g c j » p c /
 r q n e v v^{3/4} m Æ n p g x g | k o g i² u f | { c |^{2x} g v o^a t e k w u
 v k g p p g i { g f k nⁱ v n n g | f i⁰ G | c | v l g r e p v g w. j q i { c |
 g n d d k r² r f^a d e p 3; 2: / d e p g | c r q n^a t k p e r v^t r² r /
 f^a w n 3539 / g v f | v. v g j^a v n g w x g n n g x g u g d d g v. o k p v c
 v^{3/4} m g i { j^a | k n e r g p f^a t k w o

J q i { c d q p { q f c m o o² i v g r l g u g d d n g i { g p⁰ C
 v^{3/4} m q t u^a i k Æ n g k² n g v d g p k i g p g n g t l g f v x q n v c
 | u k f » p e r v^t j c u | p^a r e v k u⁰ W i { c p l u c v^{3/4} m q t u^a i k
 n g t g u n g f g r g o v Æ p { q o » t² u² v n g t g u l v² p { g m² u | u k /
 f » m d q p { q r f q w^a m r g. v^{3/4} m g o d g t p g o k i g p p { Æ v
 Æ n g v j g l. u q m u^a |^{2x} g u j^a d q t Æ m u | q m c w^a m r g n g v
 g t t r⁰ U q m n e n g i { u | g t d d x q n v g i { q t u^a i q v l c p l e u^a /
 t q m n e n o g i j » f | c p k² u n k h q u | v p k o k p v^a t w n e m wⁱ /
 e k » p² u^a t w u^a n fⁱ u q m p g j² | u² i g k p v^{3/4} p k c h g l Æ n g v⁰
 G |² t v k u x q n v O w u | v h c M g o^a n g n w c | g i² u | v^{3/4} m
 j k g rⁱ n g v o g i d² p w x c² u l » h q t o^a p n k x² x g c v^{3/4} m
 n g l² d r⁰ M k u g d d u² i g k m c i^{3/4} p^{3/4} m^{3/4} u^{3/4} o² p { g m rⁱ v
 v³ m g p p g m j c u | p^a v⁰ F g v g t o² u | g v g u g p c n g i v^{3/4} d r^a /
 n^a t » n n k u | q t f | q w | u k f » m k u p c i { t² u² v x g w g m d g p p p g⁰
 G | g n p g m c | u k f » n p c m w i { c p e u c m n Æ p p e r v^t t w m
 x q n⁰ | r r g p U c m p k n d g p. c j q n O w u | v h c M g o^a n k u
 u | Æ n g v g w. c | k l Æ O w u | v h c o² i u c l^a v u | g o² x g n k u
 rⁱ v j c w c. j q i { c | k w » t k² u k v^{3/4} o g i d g p² n | u k f » m p e r /
 v³ t c o g p p { k g g n g t l g f v⁰ C | u k f »^{2x} j c u q p r e v q u
 w i { c p c v^{3/4} m g i { j^a | k² x j g | o g t v g | k u j q r f^{2x}. f g
 g p p g m u |^{3/4} m² x g k k u x c p p c n⁰ P g x g | g v g u g p o k p f g p

vk gpnkgepe ²xtg j²v ul ^{3/4}m²x gukm co k cpp{kd»n hqp/
 vqu. o gtv kn{gpnqt. gi { j »pcrrcn v̄/ddgv ul^a o ¶pcpcn0
 C| ktcgk^vm pcr^vtc gl gpnk^ññ c xkñi vgtgo v̄u²/
 v n ng|fk c| kf ul^a o ¶uv²u o^at l»xcn c| ^{3/4}gl gtj cv
 ul^a | w³p vct0

C| ^{3/4}o²p{. gl c o^aukm pci { ngtgungf t²vgi.
 ul kp^vp n^vv m^ñpd^{3/4} pcr^vtv jcul p^ar0 Gi { km t²ul g
 c I tgi qtk²pwu. o^aukm c Lwk²pwu l²rg pcr^vtv jcul/
 p^arlc0 Cul gtlpv. jqi { o gn{km ^{3/4}o²p{ ô i tgi qtk²pwu
²u o gn{kngi { gu^ñ/nevqknwuj kv 0

Gdd n c ngj gvgvgp ^{3/4}ul g/xkuu cu^ai d»n n^{3/4}gvgv/
 | gw. jqi { o kpf gp v̄^{3/4}m Æu^ai qp²u/ qnkcvqj j^atqo/
 p²i { f^awoqv ku ¶vc m ô . fg l»hqt o^ap ugpnk ugo
 wfvc. jqi { c o^aukm o kv²tv xcrc0 gn{ nk| ^{3/4}v vgt/
 o kpwu crw0

Wi {cp¶i { xqrv c| to²tv²mgn²u jquu| o²tv²m
 ngn ku0 Pgo cnetlwm gppgm c ng[¶]u^axen c ul »v i {ctc/
 r¶cpl0 I qpfqj cvpk o leuqfc xkuu| co ctcfqw^ai xqrv
 qw. cjqn c| gng0 k gn hgn²vngk ku j²p{q| pcm c rqn/
 i^atk²u ngtgungf gm khqi crqo ul cd^an{qu^ai^apcn0

G| gngv c ngj gvgvgp^a mcrqvqnev ul Ævvgw o gi
 O wul vhc Ggo^an co knqt c o²vgtv²u c| gi {u²i gu I gt/
 i gn{l²rg pcr^vtv vgw n^{3/4}gng| x². o kpf gpnk ul^a/
 o^atc0 Grtgpf gng gl gpnk^ññ c| v ku0 jqi { gl gpv^ññ eucm
 c r²pvgm ngj gv Æppgr pcr0 C| gn w Æi { xqrv jqi { c
 ngtgul v̄p{gm c xcu^atperqv Æn²m o gi. c o qj co gf^a/
 pqm c r²pvngv. c |uk»m o gi c ul qo dcqv0 Xcu^ar/
 i qu nku^vv ngmgw vgj^av xgl gvpk o kpf gp x^au^atn» v̄^{3/4}
 t^{3/4}m rqn^atpcm ett»n jqi { o gn{kn ngtgungf j^{3/4}
 o gn{kn pcr vgj gkdg c r^ad^a v0

Mgo^an gn w c v̄^{3/4}m go dgt ô o^at o kpvc|^a vr/
 i qu nkurqn^at pgo ku pci {qp²tfgm f^{3/4}v o²i c|
 ¶^au²u qnku^au wfqo^ap{c k^apv0 O²i ngx²udd² c|
 ktqfcm k v̄^{3/4}m p{gnk k^apv. co gn{ ctcd²u rgt|uc
 gng0 gnd n^amqw l»t²ul dgp0 G| v c o xgnv p{gnkgv c
 v̄^{3/4}m nkurqn^at pgo ku²tvwg0 C j^atqo l²rg v̄^{3/4}m
 ¶^aulgn n^{3/4}ñ Æn ku eucm c ngi gi {ul gt dgdv wfvc c|^a v
 rci qu ¶^auwf» go dgt ô jc wi {cp wfvc ô xcrc/
 jqi {cp gn{kcupl0 O gtv ¶^auo »f ku j^atqo l²rg xqn0
 J c v̄^{3/4}m krctqupcm c| gn w ¶^apkxcn»lc xqrv ô j^av

qw xqncm c p{kk^apqu ꞑf>fg^anqm c rkceqp. c dcl^at/
dcp. c vgo rmo qm n³4p{²n³p0 Qw Ñngm cñt gi {
uqt ekr vku ꞑf>. crt> n³f^axcn o ci wm gn w0 ©ngm²u
X^at^vm c| Ñi {gu/dclqu. ngx²n ô xci { u|gt| f²uꞑf>
Ñi {hgrngv0 C v³4³m go dgt pgo ku cu|vcqp u|qnqw
ꞑf>pk jcpgo vgp{gt²tg vgtꞑf>gw rcrꞑf>qp. ²urgfki n³f/
vqncr0 Mgo^an o kpf g|v c|^a ulck xkuu| co ctcfqwu^ai qv
o gi u| Ñpvwg. co knqt c| kunqctghqto n³reuf p gn/
tgpfgng c|^a ncn³pqu vcpn³4ng| gw²i gv²u o kpf gp/
nkpgm o gi nngmw vcpwpk gwt>rck o>fqp ꞑf>pk qn/
xcupk²u u|^a o qrp0 Oc o^at gi { u|go Ñpm n³w^atc hgn/
p w v³4³m pgo |gf²m^a rflc gl²tv c ..xcm0 gt ô Ñꞑf>
w0 J²w|^a ²x crw pgo ogtvg ugpnk g|v c|^a w g/
pgvgv^ancrp0

M³4p o gi ngm go n³ng| p³Am Mgo^an gi {km pci {/
lgrgpv u²i v³tucfcm k tghqto l³t>n< c p m gi {gp/
lqi Ñ³u^at>n ku0 G| c tghqto ku u|kpv vgrlgugp o gi /
x^anq|vcwc c v³4³m²ngv n³r²v0 M³4 wfqo^auA jqi {
o kn|gp cñtgpfgnv n³4²rntk jgn|gvx qnrv cffki
V³4³ntu|^ai dcp c p npgn0 J ku|gp eucm pgo t²i v³4/
v²pv. jqi { gi { v³4³m p v o clfpgo o gi rkeugnmg
o gtv c| we^ap jquu| Ñ h³thk cpvcn>dcp o gt²u|ngf gw
x²i ki o gpp0 O wu|vch Mgo^an utcpf h³af ngv p{k/
qvw. n³4³u v³tucv³4u| gl³4gvngngv d^a nqncvtgpf g| gw0

Gwt>rck u|^ao^atc u|kpv jkjgvvrgp. jqi { o Ñ{gp
u|go²tgo²t|wgn vcnct³m gn r²if^avn c v³4³m p m
cffi o²i c jclwnev ku0 O^at c| ku gtn³4euvrgp xqn.
jc xcrcnk gi { v³4³m p cte^av o gi n³vjcw0 Pqu g| ku
tcf kn³ncup o gi u| pv0 C v³4³m p oc²rr Ñi { urqt/
qn utcpfqn n³xciqn²u Ñu|kn o kpv cñt p^an³pm
Gwt>r^adcp0 Oq|fwrcvo x²u|gvk kunqñ m u|ꞑkncf²/
o k²m²u dcrvkwunqñ m o xgrkn nk c pgo |gf²ngngp
^av jgxgt²uj g|²u ewntt^ai eu^an³uj q| u|qnqw j^atgo /
j³4i {gm dlq q{ o²i o c ku ô gl^av^ancn³pqucp²u|tg
ngjgvxgppkô nku²xcuci eu³ l wpqn³ku0

C j^a|cu^ai k lqi tgpfulgt ku i {³ngtgugp o gi x^an/
v|qw O wu|vch Mgo^an crw0 C v³4ddpgl u²i o gi /
u| pv0 C hvcnqm pgo k hgrkn³i qu³uc. c xgpgt^au
dgv^ai u²i gm i {>i {³uc. pgo m³4pdgp c pgo n³4^apv
i {gto gn³if^aucn³4u| gh³ i gi {²pk vci²fl³ncm c

hčvcnqm hgrkfi qu^u uc^a ncn gr²tj gv o gi gn |²ug
 vnkpv²dgp tgpigvi v³/₄v²p⁰ O gi f³/₄ddgpv . jqi {
 gl²gki o leuqf c gr⁰ctcfqw n³/₄Ä⁰ p{gm n³/₄v²ng
 rg c v³/₄m³ p gum^Ä lg pcr^la^wn pci {cp{c nqt^aki
²rg²v⁰ F|ucxkfcp Jcpwo . gi {²dn²pv o ci {ct ul^Äng/
²u it»lp . cnk c| gi {kr^vqo k cmk^an^lpcm **KO** Cddcu
 Jkr⁰kp^gm xqiv hgru²i g²u w»dd **KO** Cdfwn Jco kf
 crcw uqⁿki²iv V³/₄³/₄nqtul^ai dcp. o clf O wul vhc Mg/
 o^ancn ku kuo gtgu²i dgp^anqw. ¶lc ng. jqi { o²i c
 ZZ0 ul^a|cf grgl²p c ngi gn ngn dd n³/₄³/₄ndgp. o k^lgp
 n³/₄Ä⁰ p{gm n³/₄v²ngm c ngrgk p m l²tlÄⁿ o grgw⁰
 C| go dgt ul^lkp^v greuqf^a m^l km jqi { pgo c n³/₄²r/
 nqt dcp v³/₄v²plm o k^lfgl⁰ Eucm gn ngn q^rkcupk gi {
 k^lgp gn ngn ngrgk gum^Ä pgm c rg[¶]a^uv. co gn^lgp
 F|ucxkfcp Jcpwo ô o ci {ct p²xgp V³/₄³/₄m O²ti kv
 it»lp ô ul^lgo²n^lgugp ku t²ul^lwgw⁰ C hčvcn o gp{/
 cu^lqp{ qw^a m c rcuc rcnq^vl^apcm ngi dgu v^gto²/
 dgp⁰ O q^lf w^rvc^rpwn Äⁿ gi { r^atp^ap. cte^av l²v^lq^mcn
 v^{cn}t^vm ng⁰ J qo n^ltc xcr^o k o cp{ci i cn »t^kuk
 euw^{cu} i {²o^apvqnev²u uo c²ci f^qnev²ci cu^lv^qwen⁰
 C n^lp{ o gi ugo o q^lf wⁿ o k^{pv} xcr^o k d^ark^ap{⁰ C|/
 w²p l³p c x ngi²p{⁰ C hčvcn r^at gr^lqpwn c r^{cn}qf^{cn}
 o cu p²r^ui gi {Ä^wo c²f² u c| gn ngn ngi {gr⁰gu
 v^{cn}q^l u²u ngi {gr⁰gu cu^lqp{qⁿq^l r^gtegm o Ä^{nc}
 nk^lqpv c o gp{cu^lqp{³/₄gi f^{cl}n^llc²u dÄ^ulⁿp x²/
 i ki n^ldqi v^{lc} xcr^o gpp{k v^gto gp ô c x²tgu ngr^{gf} v⁰
 C| gn ngn n³/₄³/₄u²i r^{gf}ki v^{cr}uqn ô²u ugo o k h²t/
 eu^v pgo v^{cn}n o k^lfgddgp⁰ Xku^lqp^v jc c o gp{cu^l/
 ul^lqp{ ctel²v^lrc c| gr²dd r^ggugw xq^rpc. xcr^oul^l¶p .
 jqi { c lgr²p^rx gn ngn u²i gm k^lgf vÄndgp k^lgi uqⁿ
 n^lv^{nc}r v^{cn}xq^rpc⁰

C|^anu^lgo²tgo pgm²u gr⁰ctcfqw^ai pcm k^lgp
 nÄ²p³/₄u xgi {Ä^rng xqiv O wul vhc Mgo^an hgr²r^vki c
 v³/₄³/₄n³/₄m^a n^lur qp^{lc} c pgo k n²tf²udgp⁰ O^at r^{gf}ki c
 pgo k n²tf²u f^gv^gto k^an²u x²i ki n^lu²tk c| go dgtv
²rgv j qu^l Ä v^lp ngi j qu^ledd kf ul^lcn^lp⁰ G| c hq^l/
 vqu^v tuc²cr^o k r^tqdi²o c gi { o gi Ä^lcpf»^v tuc²c/
 nqo ngt²p dgnÄⁿ ugo o k²r²rgp ugo j cp{ci qⁿcv»
 gi⁰ Mgo^an w^lv c g^lv²u cu^lgt^lkp^v eugⁿng^lgw⁰ C| gn/
 ngn i c| fci go dgt Äⁱ { p uÄ^v t²i gddgp V³/₄³/₄n^l

qtul^a i dep. o kpv cj qi { c | go dgt gi { ul²r mxcv.
 xci { d^Δqt^Δti { cv o gi xgu 0 C | w^Δp. j c o^at o gi /
 wpc. p { wi qf wcp ul gt | gw o ci^a pcm gi { o^a ukncv0 Euw/
 r^ap c | gi { ul gt . v^Δ4d cuu | qp { v gncwcpk pgo wf »
 ul gi²p { v^Δ4³m go dgt²nv vku | vgu²i gu. o qpqi^a o²rgv/
 n^Δ4³u²i dgp0 Mgo^an l>n n^Δwc o gi. j qi { c p { wi cvk
 eucn^Δfk hqto c²u c p m gi { gplqi A^Δi c c l³k dqrq/
 i w^Δu^a pcm gi { gv^Δp j gn | gu A^Δlc0 C h^Δecn v^Δ4³m p .
 vj^av Mgo^an c^Δw pgo eucm o k^Δku | v^Δtk vkn^Δt ngj g/
 vgw. j cpgo i { gto gn^Δtxqup . xci { qr gtc²pgngup .
 xci { cn^Δt glv gtp { u n^Δvqpc. r k^Δwc xci { vpi gt²u /
 vku | vku0

C v^Δ4³m j²v^Δ4 pcr p²rg Owu | vhc Mgo^an c^Δw
 v^Δrlgugp o gi x^amq | qw0 J c v^Δ4²v^Δpgvugp euqfc v^Δ4²/
 plm²u K0 Cdf wn J co kc. c šx^Δ4³u ul w^Δpō. xci {
 cn^Δt c | gi { pgo | gf²nmgn n^Δu dd²nv Gpxgt r cuc. j k/
 v^Δrgp hgn^Δ o cf v xqipc²u dg²xgf v xqipc xcrc o gn | km
 cpnctk xci { n^Δpuwcp^Δkp^ar qn | k we^atc < c | v j kwg
 xqipc dk qp {^atc. j qi { pgo ku l^at V^Δ4³mqtul^a i h^Δ4f/
 l²p0 Cpp { k^Δc o^au rgw c | go dgt²u o^au rgw c v^Δ4³m
 o k^Δf gppcr k²rgvt^Δk^Δ r^at gu | v^Δpf c^Δw00

ZZXOMgo^a n^ΔAr qrkkn^Δ lc0

Owu | vhc Mgo^an d^Δnu tghqto lckpcm kuo gt^Δv^Δgug
 w^Δp km . j qi { p²j^ap { ul »v ul »rlwpm m^Δnu r qrkkn^Δ /
 l^apcmgugo²p { gk nku0

C | c xgu | gf gn^Δ gu r qrkkn^Δ v^Δgn j qi { c j^adqt^Δ
 c m^ΔAr qrkkn^Δ hqn | v^Δuc. ²rr cpp { k^Δc k^Δgi gp xqrv
 Mgo^an »n o kpv o k^Δf gp o^au vku | vgu²i gugp f qri q | »
 go dgtv n0 C j^adqt^Δ pgo c m^ΔAr qrkkn^Δ hqn | v^Δuc0
 C j^adqt^Δ gi²u | gp o^au xcrc o k0 J^adqt^Δ gn k^Δ2 | j gv/
 pgm cf qw n^Δp { ul gtj gn | vgn^Δ c | qpdep c j^adqt^Δ
 o^at grxg gm^Δp { xgrpk o kpv c m^ΔAr qrkkn^Δ n^Δvqi quwr
 hqn | v^Δu^av ô pgo . g | v Owu | vhc Mgo^an uqj cugo
 xc^Δmw0 L>n wf^Δ. j qi { A^Δ { gu m^ΔAr qrkkn^Δ xen ²rr gp
 gn ngj gv ngt^Δpk c j^adqt^Δ ô pgo j qi { c ngw gi { /
 o^aupcm ul A^Δm^Δ i ul gt hqn | v^Δuc ngppg0 C v^Δ4³m m^ΔAr
 i qrkkn^Δ Mgo^an c^Δw g | gp c^Δer ul kn^Δ d²n^Δdgp. vku | v^Δ /

|qw rtqdrfo^a m n^{3/4} w. dct^a w^a idcp² u mwn^a n^{3/4} g/
 r² f² udgp² ipk ul qo ul² fclxcr⁰ —i { Dwi^a t^k xcn o l^p w⁰
 I^{3/4} qtu^a i icn² u h n^r r Qtqu^a qtu^a i icr⁰ G| gn c
 j cvm⁰ cu ul qo ul² ffcn c| qppcn o gi gi {g| gw Owul/
 vhc Mgo^a r⁰ Fg uqm jcul p^a v ku r^a wc c| qtqu^a qmen
 n^{3/4} w ul gt| f² upgm V^{3/4} n^{3/4} tu^a i 0 C| qtqu^a n^{3/4} u^{3/4}
 p^{3/4} m² u i² ru^a n^{3/4} uqm ki gp jcul pqucm xqncm c| qt/
 ul^a itc p² | xg⁰ V^{3/4} n^{3/4} tu^a i gn p^{3/4} u m^{3/4} f^{3/4} k^{3/4} ul g/
 n^{3/4} w² u² g² l² p² | \tilde{A} {k² u ic| fcu^a ik jcul pc o wcv
 n^{3/4} | qw⁰ V^{3/4} n^{3/4} tu^a i dc cffki ku uqm p{gtucp{ci. ^atw
² u r² p| n^{3/4} u^{3/4} p² tng| gw⁰ G| o^a t ul l^p vg v^{3/4} m vcfk
 ek⁰ xqn⁰ Gpxgt² m crw pci { ^atev ku ngn² gw h² gv
 p^{3/4} m c|² tv. co kv m^{3/4} f^{3/4} t n^a twdcp² u r² p| dgp ner/
 vcn⁰ Fg gw n c| gi { gugw n gn² n² p² xg. c jgn² | gv
 o² i ku eucm c| xq² n. jqi { V^{3/4} n^{3/4} tu^a i ^a m^{3/4} p^{3/4} »cp
 eucm ner² qw⁰ T² i gddgp c pgnk wf xct² ». t² ik Hicpek/
 qtu^a i »r⁰ C| w³ p. Gpxgt crw. P² o gv² tu^a i »r⁰ =
 Owul vhc Mgo^a n crw r² g² ki Qtqu^a qtu^a i »r⁰ Co k
 n^{3/4} t r² g² ki Mgo^a n² r² vg x² i g h² r² l^a tv. c| cpi qn gl/
 w³ p r² g² ki c| co g² kn² k ul^a n^{3/4} uqm² u n^{3/4} u^{3/4} p^{3/4} m r² p/
 f² w² m² h² n V^{3/4} n^{3/4} tu^a i l⁰ » fl^a v⁰

Mgo^a n gi { km n² i h² p² v² qu² cdd m^{3/4} r² q² k² n² k² ul² n² g²
 c| ^a n² cr² n² gl f² go² p{g| gw ul ccf cdcf k ul gt| f² u.
 co gn² Chi c² p² kul² v² p² » n Kcnki gi { g² u² w² g² c o w² w² a² p
 p² r² n² g² v gi { ic| fcu^a ik² u r² q² k² n² k² v² / o ddgp⁰ G| ku
 qn² cuo k xq² n. co l² j² gl h² j² c² » v pgo wf² v² m xq² r² c
 r² v² g² j² q² l² pk c t² i gddk v^{3/4} m r² q² k² n² w² u² qn⁰ C uk² c² u²
 ul v² p² k² c qtu^a i qm ^a m^{3/4} p^{3/4} » tkx² r² k² a² r² udcp. i { r² n² w² /
 f² udgp² u j² cv² tx² kn² pi^a u² qn² dcp² n² gm c| gn w gi { o^a u/
 ucr⁰ Owul vhc Mgo^a r² cm c| q² p² dcp gl ku ul² n² g² t² \tilde{A} n⁰ G² r²
 r² v² i cv² w c v^{3/4} m^a n² co gp^{3/4} n^{3/4} j^{3/4} gl g² p² n² k² \tilde{A} n² pgo eucm
 c v² c² p² ul² l² q² t^a p² k² c w² c m² u² f² ». j² c² p² go T² g² c ucj. c|
 \tilde{A} l Rgt| ulc. K^a p eu^a u^a t^c ku⁰ U v. M² q² p² u² c² p² v² r² q² n² dc
 r² v² i cv² w o gl gn ul^{3/4} h² q² t² w² v gn c x² k² i v^{3/4} v^{3/4} p² g/
 r² go dgp o X² G² f² y² c² t² f² cpi qn nk^a n² ku⁰ C dc² m² p² k
 qtu^a i qm² n² xcn² dct^a w^a i qu n² r² eu² q² r² c² v² k². c| \tilde{A} o p⁰
 šDcm² p Dr² q² m² j² q² l² o xcn² euc² v² n² ul^a u^a xcn² gt u² w² g²
 o gi 0 G² gm c ul go o gn² v² c² » o gi r² ge² v² r² v² u² g² c pci {
 m^{3/4} f^{3/4} k^{3/4} dct^a w^a i qn² p² cm l² gn² p² v² u² g² dk² v² u² w² m² c
 v^{3/4} m² r² q² k² n² ^a m^{3/4} p^{3/4} » u^a i^a v. ul k² t² f² u^a i^a v² u c| gn²

p^{3/4}m gi {²pk vgnk^vn²v ku ucl^av j c|^al^adcp0 Mgo^an c
uqm m[~]Ar qrkknck ukngt n^{3/4} gr gwg. Ai {^am^qw t^{3/4}kf/g/
ugp c| KⁱÄpgo | gf²mgn w. o k^vvc j c| c c^vlc0

Pgo kuo gtvgj gv[~]Am c| qpdc^p Mgo^an m[~]Ar qrkkn/
n¹l^av cp²m[~]An j qi { t²u|rgvgup t^a pg xkⁱi i[~]uwpm
Mgo^anÄ0p0Fctfcp^gm/r qrkkn¹l^atc ku0

V^{3/4}3/4[~]mtu¹a i m[~]Ar qrkknck j gn{| gv²pgm wi {cpku
dk qp{qu^a mcpf[~]u^ai qv cfqw c|. j qi { c v^{3/4}2^vpgrgo
wqn[~]»²xu^a|cfckdcp V^{3/4}3/4[~]mtu¹a i xqiv c pci { vgp/
i gtul qtquqm c| f|ul^ad»n Gwt»rc hgr[?] xgl gv^al^at»
tg0 G|v c i gqr qrkknck cfqwu^ai qv Mgo^an ugo j ci {/
j cwc hki {gr^o gp n¹k[~]Ä0 C| m[~]Ar qrkkn¹l^a pcm ku c^rcr/
xgl gv^v vgrg c| xqn< o gi »xpk² u h[~]Ä i gv^gpu²i gv
dk vq^ucpk c u|qtquqmpcn0 Vwf lwm j qi { c| 3: 930
²xk m[~]pf qpk o gi^a mcr qf^auqp c| v j c^v tq|^v m gn j qi {
eucm Qtqu|qtu¹a i² u V^{3/4}3/4[~]mtu¹a i vctj cv j cfkj cl»/
nev c Hngvg/vgpi gtgp0 O^au j cfkj cl»npcm gi {u|g/
t gp o gi v[~]knq^wm j qi {^a vgrlgpgm c u|qtquqmp0
G| xqiv c| c|^a mcr qv. co gn¹gv Mgo^an o k^vvgi {^{3/4}3/4[~]m¹
u²i Än^a vgw0 3; 3: /ki pgo xqiv u|cdcf o^au pgo | gk/
u²i j cfkj cl»npcm^a vgrpk^{3/4}m c u|qtquqmp0 C u²x/
tguk d²ngul gt| f²u o gi u| Äpvgw gl v c|^a mcr qvq0 C
Fctfcp^gm¹ m² u c Dqu| rqtu¹ 3; 43/dgp o gi p{¹n0
Kio gtvgu. j qi { c d²ngn^uphgtgpek^a m dk qp{qu^a x[~] k
wcnv. ¹ { c Fwp^av ku. pgo | gn^{3/4}k vgtÄvpgm p{kn/
x^ap¹q^wn0 G| c| grk xqiv k^ap{cf» c v^{3/4}3/4[~]m vgi gt/
u|qtquqm n¹tf²u²dgp ku0 Co knqt c|^v p 3; 46/dgp c
rcwucppgk vcp^aeunq¹a uqm cmcm^axcn c v^{3/4}3/4[~]m Mq/
o^an ngl fgo²p{gl²u²tg. o gi n¹u²tgn²m j qi { xku|c/
u|gtg|²m h j cw[~]u^ai wcnv c u|qtquqm hrgw. gi {gn tg
o²i euÄhucp o gi dwncm g vgtxxgn0 Vqx^addtc ku
pgo | gn^{3/4}k vgtÄgv o ctfv c j ¹gu x[~] kÄ0 G| xqiv c|
^a mcr qv gi²u| 3; 5: /ki. co knqt ku x²i tg. c o qpvtgwzk
o gi^a mcr qf^audcp. V^{3/4}3/4[~]mtu¹a i xku|cner v c u|qtq/
uqm hrgwk hgn²i lqi^aÄ0 Mgo^an m[~]Ar qrkkn¹l^a pcm pci {
ukngtg xqivg|0

Gi { qtu¹a i m[~]Ar qrkknck xgl gv²u²pgm kuo gtvg/
v²u²p²n vgo²u|gvugp u|go Äi {tg ngm xgppk c| qt/

u^ai h³/f tcl| k j gn{| gv²v. fg h rgi u| qo u²f ckv ku⁰
 X²i u grgo |²udgp gl c h³/f tcl| k j gn{| gv j cv³tq| | c
 o gi gi { qtul^ai m³Ar qrkkn²ek rtqdr²o^a kpcm rgi pc/
 i { qdd t²u |²v⁰

V³/4³/mqtul^ai u| qo u²f ckv Mgo^an kf gl²dgp gl gm
 xqncm² Gw²r c hgr²< Dw²i^atk. f | ukc hgr²< Qtqu| /
 qtul^ai. K^ap. Kcm U| klc⁰ Xcmo knqt c| Qwqo^ap
 Eu^au^atk Dktqfcmqo. v³/dd. o kpv j^atqo u| qt cpp{ k
 u| qo u²f qv vctj cvqw u^ao qp⁰ J ku| gp o²i XK⁰ Oq/
 jco gf V³/4³/mqtul^ai c ku j^atqo h³/f t²u| vgt³Argv²p
 hgm³f v⁰ Mgo^an V³/4³/mqtul^ai c o^at eucm Mku| f | uk^av
 hqi rnc o ci^adcp. gi { gwgp nkugdd gwt²r ck h³/f fctcd/
 dcn gi { ³Aw⁰ Rctvckv c O^atx^ap{ /vgpi gt. Hengv/ vgp/
 i gt. Gi gl/ vgp i gt. H³/f n³/4 k/ vgp i gt o quc⁰ 98: 058
 p²i { | gvnkqo²vgt vgt³Argv²p hgm| km c| ³Al V³/4³/m
 qtul^ai o C| gwt²r ck h³/f³/p hgnx v³/4³/m vgt³Argv gdd³k
 o kpf³/u| g 450 97 p²i { | gvnkqo²vgt⁰ Gmqt c wi { cpk
 Mergv Vt^a ek. V³/4³/mqtul^ai o gi o ctfv gwt²r ck
 t²u| g⁰

V³/4³/mqtul^ai hgnx²u²p²n hqi xc vgi^av qn{ gzrqp^anv
 j gn{| gvdgp xcp. j qi { c rgi v³/dd xkf i gugo²p{²tf g/
 nkv u^atqic⁰ Qtqu| qtul^ai hgn n Gw²r c. dcm³pk t²/
 u| g hgn n fg c h³/f n³/4 kgpi gtk j cvcm cm P ci { /
 Dtkc ppk. Qrcu| qtul^ai hgn n ku²tf gngxg xcp⁰ Co k
 r gf ki f | uk^adcp v³/4²v²plm cddep V³/4³/mqtul^ai kcnk
 k^apk²u u| f| kck j cv³tc t²x²p gujgv c xkf i v³/4²v²pgm k
 gugo²p{ gm hqi »u| gr²dg⁰ Kv. U| f| k hgn n m³Ar³/p dg/
 nreun²fpcm o²i c hcpck²tf gngm ku V³/4³/mqtul^ai
²tf gmgt³Argv²dg⁰

Hgm gt³An c n³tf²u< x^allqp o k{ gpgm x²f j gv m²e
 cfqw gugvdgp V³/4³/mqtul^ai j cv³tckgpp{ k^ap{ dcpA

C| v ngm x^arcu| qrpwpm j qi { pgj gl gp⁰ C| Qwq/
 o^ap Dktqfcmqo m³Ar f³/v cppen²gl²p wi { cpgl gmngn
 c dclqmer⁰Rgtul g. pci { qdd o²t²ndgp⁰

C o ck wrcf qp³r r r gpk v³/4³/m vgt³Argv n³/4 gr²f
 u^atc|²u o ci cu j gi { xqpcn xqpwn x²i ki⁰ G| c o ci cu
 hppu³f m co gn{ gv c j gi { gm n³/4 Ar³/v rpgm o kpvgi { 3222
 o²vgt o ci cu⁰ Mcreun²fpcm j q| |^a o²i n³w| gt/
 j^atqo u| qt qn{ cp o ci cu j gi { gn² gl gm c Dcm³p
 j gi { n³peckpcm hqn{ cv³uck⁰ Wi { cpk{ gp j gi { xkf²m

xqpwn c| qtqu| jcv³t hgr² ku²u c| $\frac{3}{4}$ o²p{rcmc qt/
 ul^ai t²ul k^ap{^adcp0 M²u²i vgrgp. jqi { gl gm c jcv³/
 tqm ct^ap{rci nku gt mgn x²fjgv n0 C l^atjcvvcp
 jgi {k wcm co Ai { ku pgj²||² vgu km c| gn p{qo w^au0
 Gddgp c| k^ap{dcp c jcv³tx²fgrgo v³xqt»n ugo cn/
 nqv qn{cp i qpfqv²u pgj²|u²i gngv. o kv c vpi gt/
 rctvk t²ul gm²u c| Gwt»rc hgr² gu jcv³t0 C vpi gt/
 rctv ul ci i cvq. xk²g eugpf gu²u c v³4v²pgrgo uq^ap
 pgo gi {ul gt rt»d^amaj vcm kw o^at rctvcul^ampk V³/₄
 t³4nqtul^ai qv v³o cf». kfgi gp eucrcvqn0 Kcm²u K^ap
 k^ap{^adcp V³/₄3⁴nqtul^ai²u ul qo ul²fckpcm h³4flg
 ul kv²g²ul t²gx²vgrpAn hqn{km gi {o^audc= K^ap h³4fl²tg
 c mtf r²|cf^au kfgl²dgp dg ku p{qo wncm v³4³m euc/
 rcvqn0 G| gm c jcv³tqm o^at ngx²udd² cmcm cuem
 cttc. jqi { nkugdd eucrcvcm gngpu²i gu dgp{qo w^auv
 hgn ngj guugp vctvck0 ô C| gwt»rc k jcv³tqp qw xcp/
 pcm wi {cp c vpi gtul qtquqm co gn{pgm V³/₄3⁴nqtul^ai
 o c hgn²vgrp wtc. c| qpdc co ¶ c vpi gtrctvqv x²f
 A0 p0 Eucrcf|uc/xqpcrk² grlw c j^adqtA cffki V³/₄
 t³4nqtul^ai gwt»rc k t²ul g o^at t²i gp rt²f^awn ul qn^an/
 jcvpc c| gugvngi gu v³Ap{qo » gt npgn0 Mgo^an i qpfic
 xqn. jqi { gl v c jcv³tv ku o guvtu²i gugg o gi gt u³ug0
 Dwi^atkc k^ap{^adcp o c o^at M²quvcpk^arqn gn/
 x²flg pgo eucm c Eucrcf|uc/xqpcn jcpgo. c| qp kp/
 pgp. o²i Ftk^arqn. c ock Gfktpg ku0 Kv o c o^at
 lgrgpv u v³4³m jgn{ tu²i^amqo^au| km l»n nk²r ¶ gw
 gt f³4ndgp0

Mgo^an i qpfqunqf qw ctt»n jqi { c| qtul^ai o kv/
 fgp jcv³t^ap ô gn ul³/₄ ku det^aw^ai qu ul qo ul²fqm^am/
 lpcm ô. c| qpdc ctt»n ku. jqi { jc g det^aw^ai xc/
 rco kn{gp xk^ai r qiknck gugo²p{ n³4xgng| v²dgp hgn/
 dqtwpc. c v³4³m jcv³tqml»nx²fjgv mku ngi {gpgn0

Vgto²ul gvgu. jqi { o kv gi jgi Mgo^arcm A^la
 ngmgw vgtgo vplg c i³/₄3⁴ j^adqtA ndcp o gi ngj gv ugp
 gn²t| gwv³4³m jcv³tgtgi gvku0

C jcv³ugtgi tghqto^ar²uc ku gi {kng xqv O wul vhc
 Mgo^an i {³4ngtgu A^l¶³u^apcn0 O wul vhc Mgo^an wi {cp
 ngn³4u|³pv v³dqtqpm tepi l^at»n ng²xg gl| gn c šrcucõ
 e³o²v ku= c| qpdc pngxng²u²d n nkhn{»cp xcrcj qi {
 o²i ku eucm o gi o ctfv xgl²tnctk wul vgn0 O kv

xqnv xgl²tne²tk xk¹v. l»n n¹wc. jqi { V^{3/4}3/4nqtul^ai pcm
 gt u jcfugtgi tg xcp u| ãm²i g0 C| qpdc¹p l»n wf¹vc
 wi {cpcmqt c| v ku jqi { ugo c| ^amcoj^a| vct¹v u. ugo
 c rqn^atu^ai tqx^au^atc pgo u| cdcf o kpf¹gpv cñt¹gpf¹gn/
 plg jcfugtgi g o gi u| gtxgl²u²pgn0 Hgxu| k v^adqtpci {.
 w»dd Eucn0 cm o ctucm²u h n¹r r gp K o gv rcuc. c|
 k³p ãk j u. xgl gv²u²xgn ukngt ãv ku gi {u²i gu. l»n hg/
 i {gm g| gwj cfugtgi gv hgn¹ n¹cpk0

Mgo^an gi {²dn¹pv c ngtgu¹v²p { nkgddu²i j g|
 vctv| » v^{3/4}3/4nqtul^aik rcnquqnev^a wgrgr¹ gwv m ãn/
 h³4f tg0 G| gm j gn²dg³pn¹pv j c| cv²tv Mgo^an crw
 pci {u^ao ã i^{3/4}3/4 qtu^aik v^{3/4}3/4n0 ¶ { c| w^ap c I^{3/4}3/4/
 qtu^ai i cn²u Dwi^atk^axcn hgpp^am» uk v^{3/4}3/4n gmgp/
 v²vgmi { ãv¹r qpvc³po ci^a » n¹cn¹w¹v0

G| c| cmqt o²i qn¹ xcn0 gt ng| fgo²p { g|²u
 ki gp jcu| pqupcm dk¹qp { wv w»dd V^{3/4}3/4nqtul^ai u^a/
 o^atc0 C Mgo^an v¹rg rcnqu^ai eugt¹g uko^ap dq¹p { qn¹/
 fqw rg0 C| »c pgo | gv²ik gmgp^v v V^{3/4}3/4nqtul^ai²u
 u| qo u|²fck n¹4^{3/4}w pl¹eu0 O gi u| pv x²i tg. cpp { k
 u^a|²x w^ap c| c| ^amcrqv jqi { gi { dk¹qp { qu h³4f/
 vt ãrgv t²u| dgp v^{3/4}3/4n t²u| dgp pgo v^{3/4}3/4n rcnqu^ai
 rnc0 ¶ { c jcvcm k xku| qp { qm»n h¹i i gp. jqn c|
 gi { km h¹n xqnv c| wtc gppgm c h³4f vt ãrgv pgn¹ wi { cp/
 cmqt c o^aukm hgm¹u| ãv c dqu| ãtc0 J c Mgo^an
 d³4eu^a mco h k eugrgng¹ gv¹ek n¹4 ãn vñ¹p eucm g| v c|
 gi { gv go n¹ ãn¹ g| o^at o ci c qn¹cp o ci curvqntc
 go grk co gm¹gn nqt^av²u Gw¹r^av l»xcn o gi gn | vg0
 C rcnqu^ai eugt²xgn dk¹qv¹qwc c v^{3/4}3/4n pgo | gf²ngm
 d²n¹l²v j quu| ã²xu^a| cfqntc. o gtv xcn¹u| p . jqi {
 pgo | gv²ik qnm o kw V^{3/4}3/4nqtul^ai pgo hqi v¹dd²
 hgi { xgtv hqi p¹0 Vgt²u| gv¹gp o^au gv¹v. j c V^{3/4}3/4n/
 qtu^ai j cv¹tkv xgu²n¹g| v¹gp² gm¹pu²i0 Mgo^an hgn/
 kuo gtv. jqi { c| kf g²dgp V^{3/4}3/4nqtul^ai dcp c rgn/
 ngm rcekkn¹n¹uc o²i pgo hgn f^{3/4}w qf^aki. jqi { ô
 vñ¹p Ux^ale o k¹v¹l^atc ô d²n¹ugp gi { ãw wf¹pc²rp¹k
 k¹gp xgi { gu rcnqu^ai0 Mgo^an vj^av²rgv gi { km h /
 o x²v cm¹qwc o gi. co knqt c rcnqu^ai eugt²vô pgo
 gt u| cm¹qcp ô x²i tg| clvqwc0 O kpf¹gpnk xkj gw¹ o c/
 i^axcn c| v. co kv cñtv. ô c| qpdc¹p wi { cp¹g| v o gi /
 n¹4gvng c V^{3/4}3/4nqtul^ai dc xku| cv²tv j qph¹ tu¹cm

hrgw tgpfgmg| mĀh³/f k nqto^a p{qm»n ku0 C| cnek»
vrgu ukngttgnl^a tv0

ĩ { vj^a v hrgu »xcvqu^ai xqiv Mgo^an t²u²t n
co knqt c| qtu^ai jcv³tckv x²f gt f³/ngv ku o gi gt /
u¹lgw0 C j¹fgu vgi gtul qtquqm o quv gt ugddgm ngv
vgm o kp^v xcrcj c0 G| gmtg pgo uclp^anc O wu| vcl^f
Mgo^an c r²p| v0 O qf gtp gt ftgpf ul gt. l³/f crv^{wk} ne/
| co cv³m x²f km c| qtu^ai ²t|²ngp{ r qpv^{ck}0 C v³/4³/m
j cfugtgi d²ng^rwu^a o c j Āu| g| gt vku| v. v¹| g| gt cnku| v
²u u^a| j cvxcp| gt h p{ k ngi²p{u²i. fg V³/4³/m¹tu^ai
u Ām²i gug^vp o^a ul²m knk»u j cfugtgi gv wf hgr¹n¹/
vcp0 V³/4³/m¹tu^ai d²n²p crj cvqw Mgo^an crw o gi /
gt u¹lgw jcv³tck o³/4³/w0 Fg o²i d²n²ugddgp crj cv
V³/4³/m¹tu^ai c o³/4³/w c dĀu| n²p j k f g v g w gr²p gm
x²f d^auv^alc o³/4³/w co gr¹ { u| »n<

ô V³/4³/m¹tu^ai pgo cflc qfc c o ci^{a2}v ô .
fgc o^au²vugo cnetlc#

C j cfugtgi c| qpdcp. ku²vrgĀm eucm dk¹vq/
u¹ik ul gnr c| qtu^ai mĀr qrk¹nek xg| gv²u²dgp0 Mg/
o^an o gi vtgo vgw V³/4³/m¹tu^ai dgm gi {u²i²v ku0
Mkugddu²i g V³/4³/m¹tu^ai pcm o c o^at crki xcp0 Gu
co ĩ c t²ik V³/4³/m Dk¹qf crqo dcp c v³/4³/m²i hgr²v
ugo vgw c| qtu^ai gi²u| renqu^ai^a pcm c| crw Mg/
o^an kf gl²dgp : 806 u^a| cr²m v³/4³/m renlc c n³/4³ v²tuc/
u¹i vtĀgv²v0 Mkugddu²i gi {gf Ān c m¹tf xqn= ; 04
u^a| cr²m c u^ao wm 3; 57/dgp0 L>t²u| Āngv Mgo^an
c| »c^a wgrgr¹lgw c| qtu^ai mĀr²pd³/4 j gr¹gk²g0
V³/4x²p{ j q|^au dk¹vq¹qwc gppgm c vgrgr¹uk cnek»/
pcm rgdq¹{ q¹u¹v^a ku0 f mlq¹ kw x²i Ān o²i c| qn¹pcm
c o^at go n¹lgw^a wgrgr¹lgw n¹pgm c u^ao c ku. cnkm
3; 43 ²u 3; 49 n³/4³/w I³/4³/4 qtu^ai d»n l³/4³/m xku| c
j c^al wndc. V³/4³/m¹tu^ai dc0 G| gn¹pgm u^ao c ³/4u| gugp
656029; = fg o^at gn| ngi ku x^apf qtqncm xku| c pci {
u^ao dcp v³/4³/m euc¹f qn0 ĩ { ²tj gv. j qi { c| 3; 570
²xk p²r u^ao n¹n¹uk uvcu| vne u| gk¹p^v V³/4³/m¹tu^ai
renqu¹pcm 8 u^a| cr²ne. ; 84087; h. mĀh³/f³/p u| Āng/
vgw0 M⁴ Ān Ām 5890 23 i³/4³/4 qtu^ai k u| Āgv²u 0 Hgn
ngm o²i c| v ku lgi {g| pk j qi { Mgo^an pgo |^atm| qw
gn p²r²pgm kf gi gpd n l³/4 mgi²u¹ ĩ²ug gn r0 C| cu| /
u| ko k¹ek» V³/4³/m¹tu^ai dcp pgo r tqd¹o c< O wu| vlc

Mgo^an xgl gwg dg c|v c j kxcvcrqu v̂4³m^a n̂ ur qpqv<
 šv̂4³m^a c/. cnk v̂4³m̂n²tg|² u o ci^av v̂4³mpgm
 xcncō0 Co k eugn̂n{ ³4o²p{. i³4³4. mxf² u o^au
 nkugddu²i grgp{²ul ul^ao dcp c| qtu^ai dcp vcn̂nj cw».
 c| ku²rr qn{ l» v̂4³m o kp v d^ato gn{ km q| o^ap/w»f0
 Mgo^an l»n wfv. jqi {jc p²r²v c d²ng qtu^ai/
 Ā^ap cnetlc xgl gypk hgn ngm n̂f ul Āp²kg nevqpkrci
 ku o kpf gp guj gv ū²i tg0 O gi ku vgw² u uqnt^ap{ Ā d²/
 ngo wpn̂lc gtgf o²p{²v c o ck V̂4³nqtu^ai d²n̂u
 pgo | gvn̂4 k p{wi cō k jgn{ | gv²dgp n̂ vwm c|v n̂i/
 lqddcp ki c| qrc0

ZZXKOV̂4³mto ci {ct n̂re uqrcvqno

M̂n̂p hgl| gvj gl² tv̂Apn0 U| »rlqp gl c hgl| gv c
 ngo^ark m̂r qrknc uqt^ap V̂4³nqtu^ai² u Oci {ct/
 qtu^ai dct^avk n̂re uqrcvck»r0 Kn gl gnt n c n̂re uqrc/
 vnt»n ô vcn̂p gu cmerqo o cn ô ³4ul gĥi i gp ku
 o gi go r̂ngl p̂Apn0 Ogtv²rrgp O wul vhc Mgo^an c v/
 t³m^anco Āl^a²r²v lg xqv c|. cnk c Oci {ctqtu^ai
 k^ap{^adcp²t| gw v̂4³m tqnupul gp xgv gn ul ³4 x^anqvc
 m̂r qrkncr tqi tco o^a0

Vcn̂p jgn{ vrgp n̂hgl|²uv jcu^ap^anwpm co kf p
 V̂4³nqtu^ai² u Oci {ctqtu^ai šn̂re uqrcvck»r̂o ul »n̂
 wpn0 Uqmn̂ lqddcp hgf p² c xc»ū²i qv c|. jc gj g/
 n̂gw ô gi {ul gt gp c v̂4³mto ci {ct dct^aul^ai t»n
 dgu²rp²pn0

V̂4³nqtu^ai² u Oci {ctqtu^ai Ācddnqt k n̂r/
 euqrcvckpcm r̂p{gi g c n̂i lqdd. vgn̂gugp gmgp²vo gp/
 vgu dct^aul^ai0 Okw^ap V̂4³nqtu^ai lo rgtkrci ul v̂mw
 nqtu| cnc n̂l^at»fqw² u v̂dd² j»f²cpk pgo cnetv ô
 u v c t²ik j»f²uqnev ugo cnetv v̂dd² xku^acul g/
 tgl pk ô c n̂i d²n̂ugdd. gi {pguxqpcn̂ Ā dct^avk n̂r/
 euqrcv hgn f³4v nk c n̂v tqnup< c v̂4³m² u o ci {ct
 pgo | gvn̂4 ³4o

Ĥf tcl| kci o c o^at v̂xqn gukm Oci {ctqtu^ai
 V̂4³nqtu^ai »r0 C n̂4 gm Āndcp c| qpdc. pci {/
 cr^a kpm kf gl²dgp. gi²ul gp c o Ān ul^a| cf o^auqf km hg/
 r̂pgm n̂4 gr²ki. Oci {ctqtu^ai jcv̂^atqu xqv c v̂4³m

hgn²i vgt²Ängw⁰ G²tv ku v^{3/4}v²pv jqi { Änf^{3/4} 3/4w o c/
i {ct go kit^apuqm jqp^{x2}f^gm rqr^kkmw^uqm cpp{ku|qt
xgw²m Älw²ev V^{3/4}3/4n²tu^ai hgn²0 J ku|gp gi {u|gt gp
eucm c| qtu^ai f²rk jcv²t^ap. c| C^rfwp^ap ngngw^av
o gpgmÄpl^{3/4}0

i tfng^u u|go Äi {tg xgppk jqi { ²rrgp Owu|vchc
Mgo^an kf gl²dgp jqi {cp hgn f^{3/4}w c v^{3/4}3/4m n^{3/4}hgn²/
i^au dct^avkci Oci {ctqtu^ai k^ap{^adcpA X^allqp o k/
n|gp ²t|²uxk^ai dcp p w hgn o ci c Owu|vchc Mgo^an c
o ci {ctqm k^apv ô x^anq|vcm^g gl gm c| ²t|gr^ogk c
n²u ddk kf m hgn{co^ap ²u x^allqp o kv ku i qpf^qn^w.
jqi {cp ku ²t|gw V^{3/4}3/4n²tu^ai Äll^acmq^wlc c o ci {ct
tqn^uppgo ugv k^ap{^adcpA M²tf²ugm co gn|gn²g c|qp/
dcp eucm c v^{3/4}3/4n²o ci {ct n^re^uq^rv^qm hgn f²u²pgm
t³kf^a wgnk^vug w²p r^gj gv^xa^rcu|qrp⁰

Xk²p hgn^an^am jqi { c v^{3/4}3/4n²o ci {ct tqn^u/
u|gpxpgm t²ik p²rtcl|k u x²tu²ik cr^rlc xcp⁰ J ku|
²rrgp Mgo^an kf gl²dgp v²tv^gm xku|c V^{3/4}3/4n²tu^ai dc c
t²ik wt^apk kf nj^{3/4}< Mgo^an c|v jkf^gwg. jkxcv^qn^u
vcpn^{3/4}p{xgldg ku hgn²vgwg. jqi { c v^{3/4}3/4n²m wt^apk
uk v^{3/4}|ug gi {kn^g xq^rv c xk^ai gn. pci { nwn^Ä/
pgo|gv²pgn⁰ Vgt^o2u|gv^u. jqi { c u|kp^vp wt^apk gt^g/
fgv o ci {ctu^ai k^apv ku jcv²tq|qw tqn^upul gpx cr/
nwn^{nk}c v^{3/4}3/4nn^{3/4}x²ng^o2p{dgp⁰

G² c pgo|gvk²u hcl^k tqn^upu^aik ³pwf^{cv} v²p
²rrgp c Mgo^an ²ng^v v n^{3/4}xgv^gpÄn o gi gn| kf nd^gp
n²pi qn^w hgn⁰ Mgo^an o^at p^gxgn^gv²ug uqt^ap l²v²u u|²/
rgv jcm^jcv^w Oci {ctqtu^ai t²n⁰ C| gn| ²xu^a|cf/
dcp wi {cplu pgo dgu²n^gwÄpm ô c p²rtqn^upu^ai
gn^gp²tg ugo ô v^{3/4}3/4n²o ci {ct dct^avk n^re^uq^rv^qm/
t²n⁰ Gi²u|gp c ZXKKO u^a|cfki. cogf^ki c v^{3/4}3/4n²/
o ci {ct vgt^Ägk n²tf²ugm x²i n^gi gu gn^gv²|²uv pgo
p{gtv^gm n^gi {Äpm u|kp^vn^c V^{3/4}3/4n²tu^ai ²u Oci {ct/
qtu^ai n^{3/4}3/4w ²xu^a|cfqn^up^av j^adqtÄ xq^rv c u|
|tkp{ko km²uk ²tv^gm ²dgp⁰ O gi gugw wi {cp. jqi { gn/
tedqⁿ ngt^gu²v²{ o ci {ct k^hcm dgu²tq|xc c lcp^k/
eu²tugt^gdg. V^{3/4}3/4n²tu^ai dcp o ci cu jkxcv^qn^uj^q
lwq^wcm^c c|qpdep gl gnp^gm c o qj co gf^ap xcn²udcp
p^gxgn^w k^hcn^{pc}m xclo k ngx²u n^{3/4}Äm xq^rv c o ci {ct/
u^ai wf^{cv}j q|0 R²rf^awn U|qn^urk Owu|vchc. c n^gi gpf^au/

j[¶] v^{3/4}m jcfxg|²t ku^a n[¶]»rci gi { U qm[¶] jgn[¶]i /
 d n u^ato c| » ngtgu[¶] p{ o ci {ct kh[¶]A xqm⁰ Fg c v^{3/4}/
 v²pggo dgp ugo o k p{qo^a v ugo n[¶]lwm cppcm jqi {
 U qm[¶]rk O wu[¶] vch[¶] ô²rrgp gl gmdgp c dcd^at kf ndgp
 ô² d^ato k lgr[¶]v ku cf[¶] v xqpc cppcm jqi { n^{3/4}u²i gv
 2tg| c o ci {ctu^ai i c⁰

Fg c|²tv o gi^a mcr[¶] j[¶] v lwm c| v ku. jqi { gl c
 ZXK ZXK⁰ u^a| cfdep u[¶] l[¶]vg^a mcpf[¶]»w[¶] v^{3/4}m
 o ci {ct jcf[¶] mcrqv. xcr[¶] jqi { o²i ugo xqm[¶] gm²ti g/
 ugf gw i { n^{3/4}m^{3/4}u⁰ J c Gx[¶]lc Eug[¶]gd[¶]kgm c Oci {ct/
 qtu^ai qp ku l^atv²u Oci {ctqtu^ai qv n[¶]» gi {m[¶]tk
 v^{3/4}m w[¶]c| »pcm j[¶] gv[¶]pm c Oci {ctqtu^ai f²rk t²/
 u[¶] gkv ki c| i c[¶]» rcu^am²u vctvqo^a p{k x^ark[¶] xcr[¶]o k
 o gi o ci {ct^a j c[¶] v[¶] p. v[¶] p dg ugo xcr[¶] w t[¶] q[¶] p/
 u[¶] gpxgv²tg| v[¶] m c| ki c| i c[¶] v[¶] w[¶] n[¶] c d[¶] q[¶] w o ci {ctu^ai /
 i cn u[¶] go dgp⁰ U l[¶]vg o qf[¶] j c[¶] p[¶] k jqi { Oci {ctqtu^a /
 i qp gl gm c| w[¶] cm xcr[¶] j qi {cp q[¶] v[¶] qp[¶] q[¶] c[¶] p²tg| v[¶] m
 o ci w[¶] v⁰ J ku[¶] gp pci {q[¶] p[¶] ku xcr[¶] u[¶] p . jqi { c| cm[¶] q[¶]
 o²i d[¶] k[¶] qp[{] a[¶] t[¶] c² n[¶] p[¶] m[¶] g[¶] d[¶] d[¶] gp M[¶] g[¶] v[¶] n j[¶] q[¶] l[¶] q[¶] w v[¶] c[¶] f[¶] k[¶] k[¶]
 d[¶] c[¶] p² n o ci {ctu^ai h^{3/4}f¹l² p. c n[¶] p[¶] u[¶] c[¶] p[¶] v[¶] k[¶] r[¶] q[¶] n[¶] k r[¶] cu^a m
 q[¶] v[¶] qp[¶] q[¶] c[¶] d[¶] d[¶] c[¶] p²tg| j[¶] gw² m o ci w[¶] v[¶]. o l[¶] v[¶] r² r^a v[¶] n
 xcr[¶]o gn[¶] o gi j[¶] »f[¶] q[¶] w. p²o g[¶] v[¶] l[¶] n[¶] r[¶] n[¶] q[¶] u[¶] i r[¶] m[¶] c
 v[¶] t[¶] A[¶] g[¶] v[¶] p⁰

Co kn[¶] q[¶] t c| w[¶] p c| Gw[¶] »r^a v gn[¶] p[¶] v^{3/4}m j w[¶] n⁰
 o gi v[¶] t[¶] r[¶] c[¶] p. u v n[¶] g[¶] l[¶] f[¶] gw x[¶] ku[¶] c[¶] j[¶] A[¶] »f[¶] p[¶] k o g[¶] t² dg.
 o^a t v² p[¶] { n[¶] gi h[¶] gn ku euk[¶] m[¶] p[¶] c[¶] m c v^{3/4}m⁰ o ci {ct o gi /
 d² n[¶] r[¶] u[¶] p[¶] gm gn l[¶] gn⁰ J c G[¶] t² n[¶] o gi h[¶] k[¶] gw[¶] c[¶] f[¶] »l^a v.
 3[¶] p^a m[¶] » h[¶] l[¶] f[¶] gm g[¶] kv M[¶] q[¶] u[¶] c[¶] p[¶] v[¶] k[¶] r[¶] q[¶] n[¶] p[¶] go e[¶] cm jqi {
 o gi v[¶] t[¶] v[¶]. f[¶] g gt u[¶] g[¶] w[¶] g² u v[¶] o qi c[¶] w[¶] ku D² e[¶] e[¶] gn
 u[¶] go dgp⁰ C o q[¶] f[¶] g[¶] t[¶] p o ci {ct v^{3/4} v² p[¶] gm[¶] w[¶] c[¶] v[¶] o^a t
 n[¶] g[¶] l[¶] f[¶] k^a v² t² v[¶] n[¶] g[¶] p[¶] k c|² xu[¶] l^a | cf[¶] qu v^{3/4}m⁰ o ci {ct j^a dq/
 t[¶] A[¶] n[¶] q[¶] f^a u[¶] q[¶] n[¶] »n d[¶] g[¶] r[¶] p[¶] m i {3[¶] n[¶] g[¶] t[¶] g[¶] l[¶] gw[¶] v[¶] p gi {q[¶] f[¶] c[¶] n[¶] A[¶]
 2^u v[¶] p o^a u. r[¶] q[¶] i[¶] k[¶] k[¶] n[¶] c² f[¶] g[¶] n[¶] l[¶] n² i g[¶] d[¶] d[¶] gp J k[¶] c[¶] v[¶] m[¶] /
 u[¶] c[¶] p ku k[¶] v[¶] r[¶] q[¶] n[¶] h[¶] g[¶] h[¶] q[¶] i^a u⁰ X[¶] c[¶] p c[¶] d[¶] d[¶] c[¶] p n[¶] v² i v[¶] g[¶] r[¶] p[¶] A[¶]
 xcr[¶]o k jqi { c v^{3/4}m^{3/4} p[¶] go jqi { E[¶] c[¶] t[¶] h[¶] n[¶] v² u
 C[¶] to r[¶] t[¶] w[¶] l[¶] v[¶] t[¶] g[¶] n[¶] v[¶] j[¶] q[¶] l[¶] v[¶] m x[¶] q[¶] p[¶] c p{c[¶] m[¶] v[¶] n[¶] t[¶] c. j[¶] c[¶] p[¶] go
 g[¶] n[¶] g[¶] p[¶] n[¶] g[¶] l[¶] n[¶] i. o ci {ct v^{3/4} x² p{g[¶] n[¶] v. I {w[¶] ch[¶] g² t[¶] x^a t[¶] q[¶]
 o gi² r[¶] r[¶] gp g[¶] w[¶] »r[¶] c[¶] k w[¶] f[¶] x[¶] c[¶] t[¶] v v[¶] t[¶] v[¶] m o gi⁰ P[¶] go d^a p/
 v[¶] q[¶] v³ m c n[¶] g[¶] t[¶] g[¶] u[¶] v² p{ x[¶] c[¶] n[¶] u[¶] v² u u[¶] g[¶] i[¶] q[¶] n ugo c[¶] n[¶] e[¶] t[¶] v[¶] c[¶] m
 g[¶] t[¶] u[¶] c[¶] m[¶] e[¶] n d^a t[¶] n[¶] k[¶] ku c o q[¶] j[¶] c[¶] o g[¶] f^a p x[¶] c[¶] n[¶] u h[¶] g[¶] k² /

vgrtg nrp{ulgtfpgpko Vcnp. ô rgtulg cl cmmqt
 nqt ul kpl²tg ngul^anfxc. ô c o qf gtp cpiqn i {ct/
 o cvqu^u u grxgkj gl jcuqpn» p²o krgi cl. cjqi {cp c
 jkxcvcrqu v^{3/4}m hgrhqi^au cmmqt kdep c ncvpckri
 o gi j>f^uqw o ci {ct vgt^urgvgp c p{wic k²rgvgrhqi/
 i^auucn²uc o ci {ct j²v^{3/4}pcrrcnul go dgp^amqw0

Vj^{3/4}m^{3/4} 2u \ t^up{k Kqpc o^at v²p{rgi V^{3/4}m^{3/4}qt/
 ul^aidcp vcñ n o gpgnx²uv Oci {ctqtul^ai gt ul cnu
 p{wic k wtkpcm p²o gvu^u v^{3/4}gm²ugkxgn ul go dgp0
 KO T^am^el k Hgtgpe| gi²ul wfxc^axcn Dgteu²p{kxgn
 Eu^an{xcn Okngu Mergo gppgn V>vj Cpf^auucn Tq/
 fqu>dep²rk²rgv wqn> 2xgk0 T^am^el k hc. KO T^a/
 m^el k L>| ugh ku v^{3/4}m ugi^ui i gn v^{3/4} Oci {ctqtul^ai
 k^ap{^adc0 | u jc Eugtpcxqf^ap^an pgo ul>u^ulc gn cl
 wqn> T^am^el kv c x^atcvcp jcn^a ô nk wflc. o c
 pgo gi { T^am^el k f kpcul^u k^u ^urg/g. ô 2rrgp c v^{3/4}
 t^{3/4}m^{3/4}l>xqn^ad>n ô c o ci {ct nk^an{^ai t>pu^apA

C| qpdep o ci^adep V^{3/4}m^{3/4}qtul^aidcp ku uqm o c/
 tcfcpf>v cmqv gmmqt kdep cl qfcvgrgrfgw o ci {ct
 nr|0 Okngu rxxgk cl cmmqt v^{3/4}m xku qp{qnpem
 v^{3/4}m kqfcrqo v^{3/4}v²pgk dgeeu gn ku d^u> o gi^{3/4}m^{3/4}u²/
 ug0 Gi { o^aukm o ci {ct m^uwel go kpi^apupcm hc.
 V>vj Hgtgpe. c Fctfcpgn^an^ev gt u^ulk o gi. ô À {
 jqi { c šOcf|uct M^ungul k c šOci {ct Vqtqp{ō. o c
 ku jkfgk c o ci {ct o w^an^au ng²v V^{3/4}m^{3/4}qtul^ai rgi/
 hqvqucdd pgo | gkx²f^{3/4}gl g²dgp0

C v^{3/4}m^{3/4} jcvcrqo gmmqt kdep cl qpdep o^at jc/
 p{cv^aupcm kpfw0 C| gwt>rck^anco tgh^ato^avtqm
 2u ul gtxgl moquv o^at v³i vgt^urgvgv n^avpcm V^{3/4}m^{3/4}
 qtul^aidcp rqrknek^{3/4}rgvkm o gi xcn>u^uu^atc0 Oc/
 i {ctqtul^ai t>n ku ul^ao qu vgx kpfwn o gi c o^at tqo/
 n^aupcm kpfw> V^{3/4}m^{3/4}qtul^ai o gi tgh^ato^an^au^atc0 Oc/
 i {ct hgl d n rwcvpv nk cl cmmqt o²i V^{3/4}m^{3/4}qtul^ai
 dktv^andep rxx Ul wgl^aw^ai^au^apem i qpfqrvc ku0
 Jc *o gi xcn>u^uu^am V^{3/4}m^{3/4}qtul^ai pcm o²tj gvgv
 jcvcr cv²u xci {qpvlgrpv c eucvtpc o gi ul^urgv²ug0
 D^at> Mgtnguj^a|k Mgtngu M^utqn{ rfgki. gi { O^a/
 tlc Vgt²|k/tgpf gu o ci {ct i gpgt^aru vj gv²i gu hc.
 pgo uq^antc Apcm ku kpfwn V^{3/4}m^{3/4}qtul^aidc< c ul w^u

vppcm xku| i qpf qucp nkf qri q| qw r²p| Ñi {k vgtxg/
 ngv. co gn{gmgcn c hqn{vqp tqo n» r kcu| vgt ²t²vⁿv ng/
 j gypg ucckk^a ipk0 C d²euk nñ| c| qpdcp Dwnetguv
 dgp. gmmqt v^{3/4}m vgt Ñgvvp ô nup| vn c t²x²p grhq/
 i c|c c o ci {ct wf»uv ²u ngtgu| vñj Ñ| c u^ao ¶^a/
 uck0 Rgf ki Mgtgnuj^a| k Mgtgnju M^tqn{ d^at» ²t²v/
 ngu ²u nqo qn{ vgtxngv xkw o ci^a xcr0 Vwf qo^a p{qu
 o wññ kpcm gi { t²u| g. o^aumñ^{3/4}pdgp c pci {u| qo/
 dcvk lg| ukw³ m p{qo f^a kdc p nñp{xcrcndcp lgrgv
 o gi 0

C nñ^{3/4} grgf²u O ci {ctqtu^a i ²u V^{3/4}mqtu^a i
 nñ^{3/4} v gmmqtkdcp o²i eucm u| rqt^a fknw0 J qn xqiv gní
 nqt o²i Gwt»rc cw»n j qi { mwnñ^{3/4}dk qw^a i qm nk/
 eugt² r²u² t n ^a mco kci o gi u| gtxgl gw mwnñ^{3/4} cwcu² ¶
 u| qn^a rvt»n ^a m qf j cwcm xqpc c pgo | gnñ^{3/4} k nñ^{3/4} g/
 rgf² u² tv rmgugf l³ thcn# Cpp^a n pci {qdd c| qpdcp
 c| ²tfgo j qi { o²i ku cncfvc m Ñw^{3/4} m cnkm c nñ³ v
 pgo | gv nñ^{3/4} k nreucrvqnev kf pnñ³ pv hgr² r² pnñ³ gv
 vñ0 Fqo dc{. Mctceuc{. Hqtte{. Mqj^a t{. x²i Ñn c
 hcvn U²ej gp{k ngrgk wc^a uck vgtgo vgw² m o gi c|
 gu cncrvnev cjjq|. j qi { Mergvvp dgppñ^{3/4}ngv lqd/
 dcp o gi kuo gtlgpgn0

C v^{3/4}m o ci {ct nñ^{3/4} grgf²u ki c| k pci { hgmgf Ñ/
 r²u² v c| qpdcp c pgi {xgpp{qrecu kf m w³ pk v³o g/
 i gu o ci {ct o gpgmñ^{3/4} u cf lc o gi 0 Mquuwj qv u| gtg/
 vgwgn ²u tqnqpul gpxxgn hqi cf lc dg K0 Cdf wn O gf/
 | ukf. c pci { Ñ¶^a u| wñ³ p0 Vcr^a p o ci c ku ²t| k< uk
 p{qo fqnqñp l^a t gddgp c vgw² dgp0 Cj qi { o quv
 Mquuwj Mlwcj k^a dc. Ñi { gi {nqt T^a mœ| k Tqf quw/
 dcp ²u Vj^{3/4}ñ^{3/4} o²i 0 Mergvddtg ²rxgl j gwg c v^{3/4}m
 p{ Ñvqwc xgpf² i lqi qv0

Mquuwj vcn o gi kpf wv c rnxgtv o ci {ct u| cdcf/
 u^a i j ctequqm u| qo qt Ñ^a tcfvc V^{3/4}mqtu^a i hgr² 0
 Vwflwm c v^{3/4}mñ^{3/4} m o kn{ gp j ukgu nk^a nñ³ ucn x² f² v m
 o gi Cwu| vt^a xcn u| go dgp o ci {ct xgpf² i gknv0

F g g| gp vñ^a m gp rgi ô pgo eucm o gi x² f² v m xgp/
 f² i gknv Uej y ct| gpdgti i gn ²u Dcej j cn u| go dgp. f g
 uqm pgi {xgpp{qrecu go ki^a pupcm o wññ³ v. o ci cu^a n

n¹uv cf vcm c v^{3/4}m^a meo k u| gtxgl gvdgp0 Mo gwI {^{3/4}i { .
 c j ¶gu Kō ckn ruc. Mctul x^at^apcm x²f lg²u c| quv/
 tqo o gi ^{3/4}m¹v lg. Hctneu Cf qth v^{3/4}m^a pgx²p< Q| o^ap
 ruc. Dgo cr»< O w^af ruc. I w{qp< Mwtukf ruc.
 d^at» Uglp v^{3/4}dqtpqm< Hgtj^av ruc ô²u ¶ { ngj gypg
 uqñki hguqtqpk c v^{3/4}m^a jcf ugtgi Oci {ctqtul^ai/
 d»n go ki t^anv xgl²tgk0 J kul gp eucm o ci^adcp Crgr/
 r»dcp. n¹v Oci {ctqtul^ai t»n o gpgm¹nv v^{3/4}m^a ruc
 ku nqto^ap{| qw0 C nkgdd tēpi A o ci {ct u| Ñrg²u
 v^{3/4}m^a nevqpcvku| vgm gi²u| ugtgi g jcteqnv o²i c|
 3: 990²xk qtqu|/v^{3/4}m^a j^adqtdcp ku0 Dcrqj j L^apqu.
 N»i qf { . N²xc { . Cndgtk gltgfgugkm Dct»j { N^au| n»
²u P go gi {g{ xqnv j qpx²f tpci {qm v^{3/4}m^a nevqpc/
 vku| vgmrgvgn0

C u| w^ap w^axct^adcp ku xqncm o ci {ctqn0 K0
 fdfwn Ogf| ulk w»fc Cdfwn C| k| ô c| gnu v^{3/4}m^a
 rcfkucj. cnk qvj qpt»n nko q| fwn ô² kuogtk c o ci {c/
 tqm h^{3/4}f l²v0 Gu gw»rck Ælc cmem^axcn o^at Oc/
 i {ctqtul^ai hgr² xgu| k Æl^av0 Mulk^axcn²u wqnc³eu/
 eu²x²n c hcvn Cdfwn J co kffcn c n¹u ddk u| w^ap/
 pcn o gi lgrpkm Dw^ap eu o gi n¹vqicvc I Æn Dcdc
 u¹l^av0 G| Æuv w^ap^adcp h^{3/4}fv cl^apf²nq| pcm ku pgnk
 Dw^acr guvp. c ngi gpf^au v^{3/4}m^a u| gpv u¹l^at»n0 Co k/
 nqt K0 Cdfwn J co k^a v»ptc ngt^a Æn dk cno cu go dgtg
 ngu| X^ao d²t { . c xkr^ai u| gtv g j ¶gu o ci {ct f| ulc/
 mwcv»0 X^ao d²t { go n¹nkcvkdep u|^ao qu²tfngnu
 t²u| nggv ku t^{3/4}| ¶v ng c| cmnqtk v^{3/4}m^a rqrknc mwku|/
 u| cvknck»n0 C ucp/vghcp»k d²ng²u c dgtkpk nqj/
 itguu| wu i t»h Cpft^auu| I {w^apcm cf cmem^acv ettc.
 j qi { o gi j^an¹rlc c v^{3/4}m^a xgpf²i dct^aw^ai^av. co g/
 n¹gv c| qm xgrg u| go dgp o²i t²ik nqpuvcp^arqn{k
 vct»| nqf^auc cmem^axcn vep^au¹qwen0 Hctneu
 Cf qthcn c| gi {nqtk 6: /cu j qpx²f vku| vgn gmnqt
 o^at Q| o^ap rcu^axcn²u jcfqu| v³n{ v^{3/4}dqtpqmēn Oc {
 M^atqn{ c| wc| ». v^an¹mq| km J kngj dgp. cj qn c n¹| qp/
 i » m^atfqnev h²ng| k o gi c v^{3/4}dqtpqn0 Q| o^ap ruc
 gi {²dn²pv pgo uqñtc c nqpuvcp^arqn{k nevqpc/
 vku| vk cnf²o kc rctcpeupqne ku ngu| 0 W| {cpeucm o c/
 i {ct go dgttg d¶|^am c o qf gtp. v^{3/4}ddp{grk v^{3/4}m^a
 j kxcvnu perkr u| gtngu| v²u²v ku0 U²ej gp{k .. f^{3/4}p

rcuc r g f k i c n g i p c i { q d d o c i { c t h c . c | c p p { k u l q t
 h³/f i g w h c j^a | c m n e n v g r g M q p u c p v p^a r q n { . v | q n } » /
 o g p v c p i { c r e n g u | 0 u | g t x g | k o g i c | c | » v c x k i i /
 j { x² x^a n v v³/4³ m v | q n } » u^a i q v 0 M w p q u K p^a e . c M g /
 r g k C n e f² o l c n f u d d k k i c | i c } » l c . c t² i k v³/4³ m p² r /
 o g u² m g i { k m x k i i j { g u i { l v l g U | w o d w r d e p 0 M w
 p q u v c p { l c g i {² d n f p v v³/4³ m p { g n t g c | q w k f | .
 m } » f k c | A i { p g x g | g w s t g h q t o r c u^a n e v o k u . { | c
 V³/4³ m q t u l^a i * n e v q p c u^a i^a v A l^a u | g t x g | p² o g v x q p f g t
 I q n | r c u^a v k u 0 V j c n { M^a m^a p² u H i c n p } » k X k r o q u
 r A u r³/4³ m² u n f² t k m c v³/4³ m^a m e o k r g x² n^a t e m² u c
 E q t x k p^a m h e m w c v² u c u t g p f g |² u g v n k p v g² d g p u | g /
 t g l p g m j c r j c v e v e p² t f g o g n g v 0 | u c j q i { c o c i { c t
 g i { g v g o k h l A r^a i O k j^a v r c u^a p e m c v³/4³ m p c i { x g /
 |² t p g m c l^a p n h g n f { u | n e t f q v . A i { x k u | q p v p g o u q n² t c
 c E q t x k p^a m² u o^a u o c i { c t g o i f n g m x^a p f q t q p e m
 X k u | c v³/4³ m h³/f t n O c i { c t q t u l^a i t e 0 C n² v p g o /
 | g v d c t^a u^a i c x c n } » u^a i q u t g p c k u c p e g^a v² r k 0

C | A l^a u | A r g v v³/4³ m k t q f c i q o g i { k m p c i { c r e m
 l c P k i l^a t J c p w o . c P^a o k m M g o^a m e n c v³/4³ m R g v /
 h x g n g i { k f d g p h e n v p v A i v³/4³ m n³/4³ p 0 G | c o g /
 t² u | j c p i A t } » p g i { O c i { c t q t u l^a i t } » n V³/4³ m q t /
 u l^a i d c o g p g m A n v² u q w k u j^a | c u q f q w . g i { n q t k o c /
 i { c t j q p x² f v k u | v i f p { c 0 C v³/4³ m k u n q r^a u i { g t o g n g m
 p g o u q n² t c c | x g t u g v v c p w l^a m² u M q p u c p v p^a r q n /
 d e p w e^a v k u p g x g | p g m g n t } » r o 0 O g i l g r p p p g m c v³/4³ m
 n r q n d e p² u n³ p { x n g t g u n g f² u g n d g p U j c n g u r g e t g .
 \ q r e² u F w o c u t g i² p { g k p g m h t k u h q t f { v³ u c k x c n
 g i { A w c n g i k u o g t v d d o c i { c t { t } » m o w p n i k p e m h q t /
 f { v³ u c k k u 0 O c i { c t q t u l^a i q p r g f k i v³/4³ m p { g r k v c p q n .
 c v³/4³ m v³/4³ v² p g r o g v k u o g t v g v n³ p { x g m l g r p p p g m o g i
² u c o c i { c t n e v q p e k u | v g m o { x² r g v g p A n g u q t q m
 { t } » l^a p e m² f g u c v l c k u o c | q t q u l / v³/4³ m j^a d q t A v³/4³
 t³/4³ m j u g k p g m v g w k d n x k u i^a | p e m c x g l² t n e t k v c p /
 h q n { c o q n u p 0 C v³/4³ m e u^a u^a t k j^a | v i l e k r g f k i
 w i { c p g m q t o c i { c t o x² u | g n v n x g u | p g m m } » p^a t^a /
 n e v = C d f w n C | k . c | g r j c i v u | w n³ p . g i { k m h c . J g /
 i { k v n N k u | v H e t g p e g i { k m v c p { x^a p^a } » n v c p w n
 U | w o d w r d e p | q p i q t^a | p k 0 O c i { c t o x² u | g m c f p e m
 j c p i x g t u g p { g n g v c | A p 0 R g v k E j c o r u q p . M q p u c p /

kp^a rqn{ ul {x² dgp0 P go uqn^a tc F | ugrngf fkp. Two k
J cmn Cdf wn J co kf. P^a o km Mgo^a n² u o^a uqm cmq/
v² uck lvg² gppgm o gi o ci {ct hqtf² udcp0 I Ñ grgm
j uk grqu| qm² u ul gtgm gu xgtugm o ci {ct^a v² Ñgv²/
ugkv qkxuj cvlc c o ci {ct n² 3/4 pu² i c dwf cr guk hq/
n{ > ktcvqndcp0

Twf qrh o ci {ct v> p³ 4/3 n² 4/4 ku gn^a vqi cvqw hgr/
u² i² xgn Ugl^a plc h j gtegi p xgn Mqpuvcpkp^a rqn{ dc0
O ci {ct v² dqtprnk pci {f² | u| gu crnc lc o kpf gp Ñw hgr/
v p² uv ngn² gw0 F² | u| j kvlc. co gn{ gv c r cf kucj pcm
cl^a pf² nq| qw. o² i² xw² gf gnki qw ul gtgr gn c ul wn^a p
p{ kx^a pqu ul vco dwk Ñppgr² n{ gkp0

G| c v² 4/3 n² o ci {ct ngxgi . co gn{ dg O wu| vlc
Mgo^a n o^a t dgrgu| Ñgvkn0 Cj qi { c 6: /cu² t| gm o c/
i {ct Ñkqu| v^a n². fg c o ci {ct n² 4 p² r ku l>n go r² ng/
| gw² u ul {x² dg x² uvg c o ci {ct o gpgm Ñngm k^a pv vc/
p Ñv² | qw v² 4/3 n² xgp² i dct^a u^a i qv vi {cp Ñi { V² 4/3 n²
qtu^a i dcp ku wf v^a m c o xgn² gdd t² vgi gn^a pgo o gu|
ul g v Ñm c| Hngv² / vpi gt Ñndg vqtun> Fwpc o gp/
v² p. qw² n c tqn² p o ci {ct pgo | gv. ô c| gi {gv² gp
gwt>rck p² r. co gn{ pgm p{ gn^a p² uqm ul > vi {cp c| v lg/
ngpk o kvlc| p{ gn^a Ñ² p0

Pkpeu cfcwpm ctte p² | xg. j qi { Mgo^a n o kv w
f qw hlevn nqt^a dcp c o ci {ctu^a i t> n0 Fg edd>n j qi {
n² u dd. j cvcrqo tc lw^a uc w^a p. o kn{ gp o² n² tqn² p/
ul gpxgv o wcvqw c o ci {ctu^a i k^a pv cw>n xk^a i q/
ucp hng² gv. j qi { Mgo^a n ugo xqrv o gpv c hlevn
nqt^a dcp V² 4/3 n² qtul^a i dcp^a nci^a pqu^a i dcp gn² tlgf v
o ci {ct dct^a v² t| gm gmv r0 Cj qi { o k o ci {ctqm ku
o gi ngj gv ugp gi {gf Ñn² tg| Ñm o ci wnev hclkrei Gw/
t>r^a dcp. Ñi { c v² 4/3 n² 4/4 n² pgm ku lqi i cn ngj gwgm j cuqpn>
pqul vni k^a k c v^a xqrk hcltqn² pqm k^a pv0 Okw^a p r gf ki
h² f tcl| k xci { o^a u² tf gngmgpv² vgm gmnqt o^a t t² i gp
pgo tqpvq^a m c n² v pgo | gv² tkpvn² | u² v. g| c tknc
hcl² 3/4 u| gctvq|^a u cfqwa^a i c c vgt² u| gv² u| gn² 4/
ner qeu c v² 4/3 n² o ci {ct dct^a u^a i v² 4 v² pgv² dgp0

O ci {ct h² thcmn O wu| vlc Mgo^a n h² thk² ntc
grgl² p luo gtn² gw o gi 0 G| gm r gf ki c xk^a i j^a dqt Ñ

$\sqrt[3]{4^3/m}$ ul $\sqrt[3]{x}gv^2i$ gugk< c o ci {ct nevq^am xqncn0 Kv
 n³ y cvqw gn ul $\sqrt[3]{4}$ Owul vhc Mgo^an ul²rgucteeuqpv^À
^a| ukk o gi lgrgp²u . | $\sqrt[3]{o}$ $\sqrt[3]{np}$ $\sqrt[3]{k}$ ²u . hlo ci {ctqnc0
 Pci {qp² tf gmgu. jc gnixcuwm c Mjpuvcpv^arqn/
 dcp qn³ uqⁿki^a m^o uq^l qw qu^l v³ m^o ci {ct nevq^apk
 cwcu²pcm c ngpi {gn Rqo kcpny³ unk cn³ dqtpci {pcm
 xkuu^l cgo n³ ngl² ugkv ctt>n o kn³ gp ku xqiv c xku^l qp{ c
 $\sqrt[3]{4^3/n^3/m^2}$ u c o ci {ctqmn $\sqrt[3]{4}$ $\sqrt[3]{4}$ 0

C n $\sqrt[3]{4}$ rqp^k j cvm^o cmp^a n pci { rtqdr^o c xqiv c
 $\sqrt[3]{4^3/n^3}tu^ai$ i cn xcn> gi {Àwo n $\sqrt[3]{4}$ ²u j^a dqtÀu cfo k/
 pku^l v^a n³ uc0 Mjpuvcpv^arqn³ dcp j cvm^o cu p²o gv
 qu^l v^a m²u o ci {ct nevq^apk o ku^l k>m^a m^o uq^l vcm²u
 j kgrgu cf cvqm xppcm ette ku. j qi { c $\sqrt[3]{4^3/n^3/m}$ gl gm
 n $\sqrt[3]{4}$ ãn gi {gugi {gf ãn c o ci {ctqmn²tg^l vgm ul³kd n
 $\sqrt[3]{x}$ tqnqpu^l gpxg0 Kc^l. j qi { c n³puvcpv^arqn³ k
 o ci {ct vku^l vgm c^l gnu rknpcw>n ngl f xg pgo
 i { | v² m o ci {ct^a| pk c $\sqrt[3]{4^3/m}$ ul $\sqrt[3]{x}gv^2i$ gupgm j qi {
 c o guu^l k n $\sqrt[3]{4}$ w. euwn^ou^l ãngt^{wj} ^au nevq^am n $\sqrt[3]{4}$ $\sqrt[3]{4}$ w
^o ^au c ulⁿ x. ^o ^au c^l qu^l v^a m fg ngi h n³ r r gp< ^o ^au
 c o ci {ct0 Uqj c pgo ku gugw u^Àn³ f^a u o ci {ctqm²u
 $\sqrt[3]{4^3/n^3/m}$ n $\sqrt[3]{4}$ $\sqrt[3]{4}$ w. co knqt gl v c^l ki c^l u³ i qv c^l qvcpk
 o ci {ct vku^l vgm o gi hgrgn n³ r gp gn³gtlgul vgw² n0 Qu^l/
 v^a n³ qm fg h n³ pv p²o gv²u $\sqrt[3]{4^3/n^3/m}$ n $\sqrt[3]{4}$ $\sqrt[3]{4}$ w c^l qp dcp
 o kpf x² i ki ki gp uqu^l qt hqtf wv gn xgv² mgf² u0 Oc/
 i {ct vku^l vgm²u o ci {ct den³ m j cvj cw>ucp ugi³ ngv
 v² m ku $\sqrt[3]{4^3/n^3}tu^ai$ qv xk³ i j^a dqtÀu gt hgu^l $\sqrt[3]{2}$ ugkdg⁼
 j cf kcp{ci ul cn³ ucn h n³ pv c^l qp dcp o q^l u³ t^a i {Am
 nen²u v^À ²tu² i i gr0 Fco cu^l mw^l ki . Crgr r>ki²u Fkxct/
 dgnk ki o gpgvngm c o ci {ct nevq^am c $\sqrt[3]{4^3/m}$ euc r/
 vqm qf cⁿ p c x² i gr³ y cvvcp rqtqu qtu^a i wcn³ p.
 Gl gm n $\sqrt[3]{4}$ ãn c o ci {ctqm n $\sqrt[3]{4}$ ãn pgo gi { l^a ul qw n³/
 u dd kf gj c^l c xgl gv ul gtgr gv c o ci {ct rqrkne k^a/
 p{ $\sqrt[3]{v}$ u³ dcp. $\sqrt[3]{l}$ { T^a n>e^l { K<tg c n³ u ddk o ci {ct ucl/
 w^h p $\sqrt[3]{m}$ ²u xk²| P^a p^a uu{/O gi c^l Gtp cn³ dqtpci {.
 Dw^l cr guv n³ u ddk x^a tqur ctcpeupqne ku0 I gto cpwu
 I {wrc gi {gvgo k vcp^a t c xk³ i j^a dqtÀdcp $\sqrt[3]{4}$ ul gn $\sqrt[3]{4}$ /
 vku^l v $\sqrt[3]{4^3/n^3}tu^ai$ ²u Oci {ctqtul^a i n $\sqrt[3]{4}$ $\sqrt[3]{4}$ 0 Oci^a xcn
 Gpxgt r cu^a xcn²u X0 Oqj co gf ul wn³ ppen ku u t . ul g/
^o ² n³ gu $\sqrt[3]{4}$ ul gn $\sqrt[3]{4}$ wgv² udgp^a nq^w0 I gto cpwu kp² | vg/ c
 Oci {ctqtul^a i d>n k^a p{wn> $\sqrt[3]{4^3/m}$ j cf hgn^l gtgr² uk ul^a n

ñfō^a p{qm Ñi {gk0 O gl g{ Kwx^a p. nʔu dd ul kp^v p gi {g/
 vgo k vcp^a t Y ktvj vgn gi {Ñw. 2 nʔ pm rtqr ci^a nlc Meo /
 ucpcvp^a rqn{dcp c vʔ434m/0 ci {ct nʔ4 grgf² upgn0 ¶/c/
 n|e| { Gfi^a t. c X3434u Fñj qrf v³ o qi cv^a u^a tc crcmwv
 o ci {ct dk qw^a i rtqr ci cpf^a lcnʔ pv o gi ¶lc gi {kn
 V3434m/0 tu^a i dcp mwv^a to ku| k>v dgv³ nʔ4v j qphk³ tu
 2 rgv² v0

Hgnv p . j qi { c| qu| v^a m/0 ci {ct o qpctej kc.
 fkr mō^a ekck nʔ r xkugn k ku v^a p{qo »t² ul dgp o ci {ctqm
 gddgp c| kf dgp Mqpuvcvp^a rqn{dcp0 O ci c c xk/
 nʔ i j^a dqt Ñu qu| v^a m/0 ci {ct pci {nʔ4 gv. Rcmxlekpñ
 L^a pqu tit>h qrcu| pgxg gmgp² tg ku. o ci {ct o^a i p^a u0
 I gtrle| { d^a t> 2u U kcuu| nʔ4 gv² i k vcp^a euqu nʔ4 /
 nʔ f xgnv 2u kuo gtv crcnck c nqpuvcvp^a rqn{k dghq/
 nʔ^a uqu nʔ434m/0 O ci^a pem c ul wv^a ppcm ku hgnv pkn
 gi { cmcmqo o cn c f¶| u o ci {ctqm uqnev^a i c 2u ul 2 r/
 u² i g= o gi ku o qpf lc p{kx^a pqucp. o gpp{k t g j cuqpn>
 gl c| ukv³ 434mxkugrvj gl 0

KX0 M^a tqn{ nk^a n{ 2u \ kc nk^a n{ p² ku o gi hqt f wv
 Mqpuvcvp^a rqn{dcp0 Gn | rgi o^a t c vʔ434m vtemqf > /
 j^a | vʔ4d vci lc. ¶| { Kgf f lp 2u Xcj kf gf f lp j gtegi gm² u
 l^a tpcm o^a t O ci {ctqtu^a i qp0 Gpxgt ku vʔ4du| 34 v³ t/
 i {cn Dwf cr guvp0 X0 O qj co gf ul wv^a pt>n r g f ki
 Dwf cr guvp nʔ4 wcv pgxg| pgm gn0 Kf gp gn | o² p{gm
 w^a p 2 tng| km o gi Mqpuvcvp^a rqn{dc KX0 M^a tqn{ o c/
 i {ct nk^a n{. x3434u cwkt^a u. o ci {ct v³ dqt p qnk f¶| /
 dgp0 C r qo r^a v nʔ f xgn Mqpuvcvp^a rqn{ d^a o wn c
 nk^a n{ v^a p{qo »t² ul v o ci {ct nʔ4 tgv² pgm r qo r^a l^a p
 k0 J wp{cf { i t>h 2u Dwt^a p m^a Ñi {o kpku| vgt. o ci {ct
 nevqpcvku| vgm 2u o^a i p^a uqm ugtgi g nʔ4 t k c| vtemq/
 f>r^a t v0 C| gl gtgi {2 lu| cnek per qnev 34 gl gt ul go 2 nʔ gu
 Ñppgr u² i hglg| k dg c nqpuvcvp^a rqn{k eu^a u^a tk kf k>/
 v³ dcp0 G| xqnv vñ^a p c t² i k kf m o qpctej kmw vʔ434m/
 o ci {ct^a mco det^a u^a i pem c| wqn>. pci {. fgo qpuv/
 tv¶k o gi p{kcvnq|^a uc0

Mgo^a n o kp v c| c vʔ4² pgrgo d n grʔ i i² kuo gtg
 vgu. pgo ul gt| gw l> vrcu| vcrvqnev c p{vi cvk ul 34
 xgv² i gugmgn xcn> gi {Ñwo nʔ4² u uqt^a p0 C p² o g/
 vgmgn 2u qu| v^a nqm^a en uqm u^a Ñ^a f^a uc xcp0 C| qpdc p

c o ci {ctqmmen o kpf x²i ki o gi vctvqc tqnqpu gpx²w
 G c tqnqpu gpx²tx²p{gu[~]cnmqt. co knqt Mgt p^an
 c pci { i^{3/4}/^{3/4} v^{3/4}/^{3/4} j^adqtÀ w^ap wcmqo tc lwqw²u
 o »flc xqrv o quv o^at t g^arkucdd crerte ku jgn{gl pk c
 v^{3/4}/^{3/4}o ci {ct dct^avk^{3/4}u|gn^{3/4}vg²u0 L»ngj gv c| À
 v^{3/4}x²p{gm u|gtkp v^{3/4}/^{3/4}qtu^ai dcp cmcm c|jcw» kf g/
 i gpgm pwo gtwu erwuwuc v ku n^{3/4}/^{3/4}vg. c o ci {ctqm
 nen o clf pgo o kpf ki nkx²grv vgw0 M^{3/4}p{gl g²dgp qw
 xqrv O²u^atqu I {wrc. c j[~]gu o ci {ct qtkpvcruk.
 cnk vclc xqrv cpcm c v[~]gn²v vci À u|ngdd dk qw/
 u^ai pcm co gn{ c v^{3/4}/^{3/4} p{grk o gi vku v[~]u^av xqrv jk
 xcwc x²i tgi clvck Mgo^an o gi d[~]u^ad»r0 C| g^{3/4}m
²u c o ci {ct wf»u u|kpv perqvc²tkpvngl vgm gi {/
 o^aucri0 C v^{3/4}/^{3/4} jgn{gu[~]u²u c r[~]vp dgv ntg xcn»
^aw²t²u uqt^ap c|w²p xcn»dcp ki gp uqmu|qt o ci {ct
 o kvc w^ap o gpgm c v^{3/4}/^{3/4} C pnet^adcp c| À
 gi {gvo gp o ci {ct vpu²m p{[~]q²u²u m[~]p O ci {ct
 k²v|gv ku r²vgu[~]0 Xg|gv lg gi {km kuo gtv qtkpvcruk/
 v²pm T^auqp{ N^au|n» rtqhuu|qt rgw. cnkv Mgo^an ku
 nk[~]vgvw dct^aw^ai^axcri0 Wi {cpcmqt P{^at^af{²u
 Mct^aeuqp{k I²|c rtqhuu|qtqm c Mgo^ark v^{3/4}/^{3/4}qtu^ai
 o gl iclfcu^ai^apcm pgxgu Àl^au|gtxgl k rgwn0 Fg
 o^au v²tgp ku. h n²r iclfcu^aik v²tgp. nk vpgm c rgi/
 Àcdd kf ndgp v^{3/4}/^{3/4}qtu^ai dcp c o ci {ctqn0 Wnglp/
 Tgxle|m C pvcn Vcj { N^au|n»²u n²u dd O^atk^auu|
 \qn^ap u|go²n²dgp gnu tpi À o ci {ct u|gtxgl k
 cnfvc c n²v qtu^ai jkxcvnu^{3/4}u|gn^{3/4}vg²ugkpgn0
 O ci {ctqtu^ai ngtgunf gm k nkxkgrg ku gi {tg lqddcp
 hngpf Àn0 C o ci {ct i^atkct i²rgngv o gl iclfc/
 u^aik ekmgngv u^an[~]q²w. c o ci {ct cit^avtgto g²u rg/
 fki c v^{3/4}/^{3/4} n^arcwgp{²u v²u u|qn^arc²dcp^am0 Eukn|
 Hgtgpe c o ci {ct n[~]xcmcm v^{3/4}/^{3/4}qtu^ai dcp xcn» gn/
 jgn{gl²ug vt²p u|gt|gw c jgn{u[~]pgp nkx^an»²tf go g/
 ng0 C v^{3/4}/^{3/4} v²gp²u|gv ku uqm o ci {ct n²|pgm cfqw
 o w²v. c rgi Àcdd kf dgp0 Vgto²u|gvugp. jqi { O c/
 i {ctqtu^ai hlgw iclfcu^aik kctc v^{3/4}/^{3/4}qtu^ai dcp
 ku v²i vt[~]vgv v²n²v v²to gr²p{gkpgm gnj gn{gl²u²tg0
 O ci {ct xgi {ki^atem c o v^ai{^awn c i {»i|u|gtg/
 nki. u|gtgrgv ncrvc c hngpf Àn l²ndgp r²x v^{3/4}/^{3/4}m
 kct nk d x[~]u²dgp0 Co kf p I^{3/4}d^{3/4}u I {wrc C pnetc/

dcp ul go ²n[gu n¹vqi cv¹u¹xen o girgeu²vgn¹g c| cmqt
 o^at xk^ai|» $\sqrt[3]{4^3/4}$ m¹o ci {ct ic|fcu¹ik n¹reueqre¹vqnev.
 Cpnet^adcp xcn¹u¹i qu nku o ci {ct n¹n¹pkc hqi cf¹v¹o
 Gddgp c x^atqudep. cj qx^a c|gn w o ci {ct go dgt.
 o kp¹v r²r^awn l²ngk D^ah¹pv K¹tg pgo ku qn{cp t²i gp.
 eucm o kp¹v o gt²ul nku¹|ulck wc|» vgw¹g dg c n¹d^av.
 Mgo^an crw t³/k¹f gugg¹ o ci {ctqm ul^a|ck v¹n¹n¹em gn¹/
 j gn{g|ngf²u¹o M¹4³/w¹m ul^ao qu gi {ul gt k¹ctqu ku¹o
 O ci {ct cu|v¹ruqm= v¹ej pknwuqm²u i²r²ul gm gi²/
 ul gp c $\sqrt[3]{4^3/4}$ n¹r gt|uc j cv¹t¹ki. fg o²i c|qp¹v¹n¹ ku gj¹g/
 n{g|ngf²vgn¹o C $\sqrt[3]{4^3/4}$ m j c¹w¹u¹i qm cj qn eucm ngj gvw.
 v¹o qi cv¹mc o ci {ct o w¹n¹v¹V³4³/n¹tu^ai dcp¹o

X²i g|gv¹n^a mlqp c $\sqrt[3]{4^3/4}$ m¹o ci {ct^a t¹weugtgh¹ti c/
 n¹o tc xqpcv¹u|»ri p²j^ap{ jk¹cv¹ru cf¹cv¹o kv ku
 ul^an¹q¹w O ci {ctqtul^ai c| wqn¹»²xgn¹dgp V³4³/n¹tu/
 ul^ai pcm^a

Gn tgdqeu^avj cv¹wm j qi { o^at 3; 58/dcp c dgj q|c/
 vn $\sqrt[3]{4}$ ul gi g 3.; 79 \emptyset 22 rgpi²t²v²m xq¹w xku|qp¹v c
 nk¹xkgn²t²v²ng vi {cp¹ddcp c|²xdgp 3.: 83 \emptyset 22 rgpi¹o
 C o ci {ct nk¹xkgn²t²v²ng c n¹/k¹gvng|²xdgp hgn¹ $\sqrt[3]{4}$
 n¹/w 5.873 \emptyset 22 rgpi²t²v²ng# C V³4³/n¹tu^ai d»n Oc/
 i {ctqtul^ai tc ul^an¹q¹w v¹to²ngm o gpp{ku²i g Mgo^an
^amco xg|gv²u²pgm wqn¹»²x²dgp eucm gi { l¹r¹f¹xdgp c
 n¹/k¹gvng| h¹pvqucdd v²vgn¹d n^amq¹w¹ ngpf gto ci
 *; s+. o c|u¹rcu| m *4349 s+. h¹n¹g *3; 3: s+. fl¹
 *566 s+. o qi {qt» *4958 s+. fqj^ap{ *434; s+. o²j/
 xku| *73 s+

! tf gn¹u o gi vgn¹pv¹pk j qi { vi {cp¹ppp{k k¹
 crw o kv ul^an¹q¹w¹pm o k o ci {ctqm V³4³/n¹tu^ai pcm
 gn¹p²t²v²m¹r A G|gm c v²vgn¹m c n¹/k¹gvng| m¹ ego gpv
 *49 s+. n¹n¹j c *7: s+. xkn¹co qu¹n¹u| $\sqrt[3]{4}$ r¹ngm *345 s+.
 pgq¹peu³/k¹gm *4: s+. n¹ew¹wm l^av²mu|gtgm *; s+. n¹q/
 x^aeu¹qv¹ xcu/ ²u ce²re³/k¹gm *8: 36 s+. t²|^atw *36; s+.
 rqtul $\sqrt[3]{x}$ »i²rgm *6: s+. rctn¹gvng¹n i²rgm *32: s+.
 xcug²p{gm *4928 s+. h¹ttcu|w¹n¹o r^am *447 s+. Fl¹g/
 ugn¹o qvtqm *4: 6 s+. xkn¹co qu ul^ao n¹n¹i²rgm *79
 s+. gp{x *42 s+. rkt¹q¹v¹ej pkn¹ck n¹u| $\sqrt[3]{10}$ ²p{gm *33 s+.
 l^av²m¹ti {cm *342 s+. lwcu| $\sqrt[3]{k}$ gv *3355 s+. vku| $\sqrt[3]{1}$ q¹w
 j co w|u¹ $\sqrt[3]{4}$ 34: s.+ i {»i {ul gt *42 s+. j cl¹w¹u| $\sqrt[3]{1}$ *97
 s+. n¹o r c $\sqrt[3]{x}$ gi *344 s+. uco qw²i r¹ *8679 s+. rqt¹egn¹

n¹ pu| ki gygn *334 s+ rco wu| cnci *38 s+ ô uvd0
 gl gpn¹fx¹ ãn f¹u| eugt¹l²m² u gtf u¹l²utg u| qri^an¹ p³/k²/
 p{gn0 ô —i { j ku| ãm gl c nktci cfqw r²rfc ku o w
 vclc gr²i u²i gugg. Oci {ctqtu^ai o k¹gp cm¹kcp
 l^atwv j q| |^a V³/4³ñtu^ai vgtog²u²pgm²u k¹ctk vgn
 lgu¹o²p{²pgmhgrhqm¹ |^a u¹ j q| 0

Ⓜ O kpf gpv gn ngn²gw o qpf cpwpm c|²tv. j qi {
 3/4u| gh¹ãi i²udgp n¹uwv¹o k²tv ku n¹pf ãv hgn uqj c pgo
 tgo²n¹ o ci cu¹ i qm¹dc c i { ão 3/4eu³/4 v³/4³m¹o ci {ct
 dct^au^ai² r r gp O wu| vlc Mgo^an c r¹cv0 Gn ngn²gw
 o kpf gl v o qpf cpwpm j qi { n¹uwv o k²tv i { 3/4ngt¹g| km
 qn{cp o²n¹gp o kpf c n¹v p²r n¹m¹dgp c| gi { o^au/
 k^ap¹k tqn¹pu| gpx ku0 C n¹v h¹ãi i gv¹gp qtu^ai j kxcw/
 n¹u xgl gv k ku^a u¹u¹m k¹glgn¹u^ap gppgm c dct^au^ai/
 pcm hgn²v¹gp r q¹rk¹nc¹k¹ 2u i c| fcu^ai k u| ãm²i gu²i²v0
 Fg gl gp v¹ro gp n¹i ku o kpf gp v³/4³m²u o ci {ct go /
 dgt o gi i { | f²ug. j qi { gl c dct^au^ai o²i eucm c
 l³/k¹ dgp h¹q| lc ki c| k j cu| pqu pci { i { ão 3/4eug¹kv o gi /
 j q| pko kpf n¹v pgo | gvul^a o^a tc0

ZZXKKMgo^an²u¹m¹/4p{g|gv0

V²tl¹ãpm c| qpdep o quv o^at xku| c o ci^a pcm c|
 gp³/4p¹gm¹u| go²n¹tg0

J qi {cp ku²n o ci c O wu| vlc Mgo^an gl gndgp c|
 k¹ mdgp. j cvm¹ c vgv r qp¹v^apA Xgi { ãm eucm u| go /
 ãi {tg gi {u| gt n¹/4 grgddt ngl vc n¹tf²uvku0

Ⓜ M¹qu¹cp¹v¹k^ar qn¹ n¹i u| gdd r ctv^ap. qw. cj qn
 c u| go. o guu| g. o guu| g gn¹v c v¹gpi gttg. j cvm¹ cu
 dtq¹| u| qdqt^an0 f m¹ h¹thk^a dt^a| qn cnk gi {u| gt
 r qn^a tk twj^a dcp. o kpf gp f¹u|² u uc¹nc¹pi p²m¹ãn o ci c
 gr² vgn¹kv0

G| c h¹thk O wu| vlc Mgo^an c v³/4³m n¹/4 v^atuc^ai
 o gi vgtgo v lg0 C r¹m¹v o kpf gp M¹qu¹cp¹v¹k^ar qn¹ dc x
 wc| » gwt^ar ck ãi { n¹vc o gi gnu pgm co kn¹u¹ c j cl»
 c| Ctc¹p| u| ctxdc d¹gn¹ep{ctqf km o kpv c| Co g¹tk¹dc
²tn¹g| go dgt c pgy / {qtnkU| cdcf u^ai / u| qdtq¹v0

G| c u| qdqt v³/4d. o kpv l¹gm¹r0 Gi {²ngv o wpnc/
 l^a pcm gtgf o²p{g0 Qw. cj qn gi {n¹u¹ gi { n¹| cf » xgl²t/

netk wu|gv c eu^au^at d²tgpegk rghj vcm o c. wi {cp/
gppgm c r^a|cf}»pcm ²tecrnc hji cflc c| gwt»rck
wcu0

Mqpuwv^arqn²u Cpnetc ô gl c n²v x^atqu
xcnrc ucl^av^apcm Mgo^anw d^at gi {km x^atqudep ugo
u|Ãrgvw jcpgo c v²xqtk pgo v^{3/4}m urcnqu^ai c
Dcm^appp0 O²i ku xcrcj qi { Mqpuwv^arqn²u Cp/
netc ku h²pcm hji cflc O wu|vchc Mgo^an0 O kpf n²v
x^atqudep p²rulgt . n^{3/4}Ãrtclqpi qw c| Ãl g^{3/4}m c
tepi l^awⁿ o gi hqu|vw h x^atqudep wⁿp o²i lqddcp.
o kpvcl Ãl x^atqunk^an²p vtÃrgv²p Cpnet^adcp0

C h²tck utcpfq² gl gtp{k hÃf twj^au v^{3/4}m p
²u h²thk0ppgr per xcp. »t²ukc v^{3/4} gi 0

Cflwm^avc u| »vc p{wi cv/gwt»rcku| go vcpÃpcn²

ô C uko c v²pi gtgp t²pi gv²i eu»pcm lcejv. xk
vtrc. tgi cwc. o guu|g dgpp c x²|dgp rlek²{ hÃf ucr/
n²u go dgtghlgn0 C| k|»/hqt» j qo qn²p ku dctp^atc
uÃv v²vgm hgm| gpgn0 Hg²t xkqtr^am j A²pcm gn rcu/
ucp c v²pi gtgp0 Hgpp c xkqtr^atÃf qp c| G^{3/4}m nleuk²{
ndqi »lc# G| gt vtqnd»n j cpi | km gi { nk^an²u. o k²vj c
c v²pi gtd n l^{3/4}ppg ô *c nk^an²u o quv gr²teu|vc c|
gi²u| utcpfq²v ²u v²pi gtrctvq0 Xcico gpp{k n²dkp.
nleuk²{ y ggngpf/j^a | xku|ppq| | c<

ô C| G^{3/4}n#C| G^{3/4}n#

ô O ci co ku. xk²gu hÃf twj^adcp. c| gi {km eu/
pcnrc wi tqo 0 Kuo gt ugko o^at xqpu|qpem ku o ci wⁿ
ncr0 I {qtucp< qfc ngm gxgl pÃpm c j cl»j q| 0 O kpf ki
xqrv xcico k ci i qfcm²o dgppgo. j c eu»pcnrc u^am
wo = gl o quv u|k²vg rgtcgm crw vqxcv pv0 P gngo
ku n²vqo ngm š v̄ ô gl gtp{k go dgtppgm o quv wi {cp/
gl c n²k^apu^ai c0 O kpf gp cte tci {qi. c| crn²qm o gi/
p{Ãpcm ô c| go dgt j k²vrgp r²gm k²o ckv²t| k0 O kpf
n^{3/4}grdd lwwpmc j cl»j q| 0

ô C| v²p o gi n²vqo c| G^{3/4}n^{3/4}0 C j cl» n²tr^av
l^ap Ãn hg²t v²ppku|kpi dgp0 M²l²tgvg. n²v qrf crw v rg.
c h²f²q²gv² a n0 Eu»pcnwpm o quv n^{3/4}xgv²pÃn c| G^{3/4}
p^{3/4}m j cl»lc gr²ngtÃr0 Ncuucp h²tf²l²c h²tr²pm h²l²v c|
G^{3/4}m ²u k²icvq²x^atcn²u^au²cn hji qo hgn r²kmp²/

u^a v⁰ ô Gi { o^a uqfrgte² u gl crw o^a t² | go lu gl gm
pgm c n² m u | go gnp² gm j k p q k n w u j c v c m^a v⁰ | t | go
gppgm c | go dgt² pgm xgu² n² | gu² n² g v g x c r² u^a i^a v. c n e /
t c v² v⁰

ô M² t ko c eu»pcndep ver uqpk n² | f g p g m
Crki luo gtgm t^a. p { w i q f v. » x c v u n q f » d e t^a v c l o t c 0
Wi { c p g | g m c | go dgtgm xq^a p^a p e m g | g m c n k m g n o^a u /
n q t » t^a m j q u u | c v d g u |² n i g v² p m p g j² | . g r k q p v r u | k e j q /
c p e r k k n k n² t f² u g m t n A

ô C eu»pcnqv uqf qtlc c v g p i g t^a t 0 C n e r^a v q m
o q | f w r v c p w n j k p^a | p e m c x k² p 0 O q u v o^a u t c. q n q /
u c d d t e n g m e n² | < c r u q p k n g m #

ô O^a t p g o² | g o c p g f x g u h² t f t w j c j k f g i
3/4 g r² u² v⁰ P g o l u i q p f q r m o^a t e t t c. o k d g l u 3/4 n² /
v g o . j q n l u x c i { q n k g i² u |² t |² u x k² i q o c h g n² A i » v e r u /
q t n² p t c² u n k^a n^a u q m t c 3/4 u | r q p v u w 0 C | G r p^{3/4} m r g f k i
o q u n² q i . h g m g n o g i j c l v c o c i^a v h g r² p m p c i { q p
n g f x g u . g o d g t k o q | f w r v c n ô c |^a p j k t v g r p . A i {
2 t g | A m x e r c o g p p { k e p . o k p v j c x e r e n k o g i c l^a p f² n q /
| q w x q r p c 0 J q i { g i { u g o o k o q p f » w f x e t k e u^a i c
o c k x k² i d e p o² i c l^a p f² m² r g p j e v j c v . o w e v l c .
j q i { o k² r g j c v e r o r e n k m g d d g p c t g p f n² k A r k g i { 2 /
p k² i d g p 0 K v n² 4 A n² 4 A p m o k p f g p n k w f l c . j q i { c |
G r p^{3/4} m o k v² u o k² g p i k i c p v k n w u v g w g n v j c l q w
x² i t g 0

ô J c c | q p d e p h² t f t w j^a d e p . p g f x g u g p² u l f | » /
u c p g i { k o d q n² i » e u » p c n d c A n² p m c m n q t c d g^a n² /
v q u^a i w p m w i { c p p g o n² r g u p c i { v g w g m n g m² t /
v² n g r² u² t g 0 O² i c p g f x g u . r t k o k² h² t f t w j c l u q f c /
v q r m u | k m c h e r h q i » n² r g u u² i² u c n e r q w d g p { q o^a u q m
n² 4 |² 0 E u c m c v k u |^a p^{3/4} 3/4 u | v^{3/4} p^{3/4} u . g n u f r g i g u k o r t g u | /
u | k m o c t c f p e m h g p p 0 C | . c o k v c | G r p^{3/4} m o q u v g i { g v
r g p r k e p^a v^a x e n o q p f q w u^a o w p n t c . p q u . c | o c /
i w n p c m c | g r g o k g t n p g m d k t q f c m^a v k f² | k h g n g n v
v² p n 0 K v p k p e u j g n² g » x c v u o² t r g i g r² u p g m x k u u | c /
g o r² n g |² u p g m² t v² n g r² u p g n 0 K v c / 3/4 u | v^{3/4} p d g u |² n 0

ô C r c t v q p o q u v c | q t q u | g o k i t^a p u q m | g p g /
n e t c . v g n d u u^a o d e p . c v g p i g t r e t v c u | c r e f 0 D g n g w i /
t e p c m o k p v d² n² m c e u » p c n d c² u c | c r^a d w m e p »
p e r^a t p {² n² d e p h e r e u g p f A n c X q i c f c r 0 G o k i /

t^apuqm cnkm o quv j c |^alwm fcr^av 2pgmkn0 Vc/
 n^ap o²i x^ai {>f>ddcp j cpi | cpcm c | cmqtqfm
 o kpv o^aunqt. ô o gtv j ku | c |. cnkpgm vku | vgr/
 v²tg c fcrv 2pgmkn< c | c | go dgt c ukngt 2u
 u | cdfu^ai o gi u | go 2n | gu^av lg0 C | grxgu | gw j c | c. c |
 grxgu | gw j qpk h²4f. c | grj ci {qw u | Ñ x^atqu r gf ki
 o kpf o kpf eucm^a rf q | cvq v lgrgpv gwm c | go ki t^apuqm
 u |^ao^atc. c |²tv. j gi { c j kgv 2u dk cm cv o gi vctv
 j cu^amc | 3/43/mgo dgtk²p { gndgp. c u | cdfu^ai dcp0

ô O quv kw kf gi gp qtu |^ai dcp qn | cp xcrnk vku |
 vgrv²tg go grkm fcrn^av. cnk c u | cdfu^ai k^apv u | gpv
 j k²dgp pgo eucn^af qv0 C O^atx^ap { /v^api gt o quv xg/
 rpe²ugp o gi x^anq | kn0 C | qtqu | 2pgngud^atn^am n²4 g/
 r²p. n²43/4un²4 Ñ eu>pcnqm j cf ugtgi 2p. j k vgrp^a w²4
 gi { hcvn n^ap { nku eu>pcn^axcr0 V³43/m Ñ hgm^anv c |
 Grp³4mpgn< u | kxgugp n^av^a o ci c o gngw0 Vgto 2u | gvu
 l>ngf xxgn 2u u | kxgugp vgu | grgi gv c | Grp³4m c | gi { u | g/
 t hcvn n^ap { > j c |^apcn0 Ngo gi { c nkeup { . hgj 2ttg
 rcmu | qw j c |> n^areu p0 C | w^ap j gn | gv hqi rcn c j c |> lc
 o gmf ukm> eu>pcndc0 Gi { km u |^atp { ugi 2flg n²4kgw0
 P²j^ap { cflw^apu^apcm o²i o kpf ki qw ngm rppkg c |
 Grp³4m n²4 Ñ ô vcr^ap eucm c |²tv. o gtv c |^amco h v/
 nkpv²n | g | vxcrj qi { o²i ku o gi n²4x^aplc0

ô Fg j^atqo go dgt u |^ao^atc o^at pgo gr^ai c
 nkr qtvqr hcvn n^ap { netk^ao c0 Gi { ku gtgvgr h²thk
 j Ì c xk^agp0 Mku |^am eu>pcn^ad>n^au |^am c r^ap { I^at/
 o x²dg0 M²tgvrp Ñ o gi tci cflc c | gi { km gxg | v0 Gu
 ¶ { ukmkm o quv o^at vxcr. gddgp c t³4 v²p | 3/4w 3/4u | g/
^an²4udcp. c v²43/4m n²4 v^atucu^ai grp³4n²4pgm eu>pcndc0
 X²i ki gxg | pgm u |²r. r^auu^a vgo r>>dcp c | gi²u | j quu | Ì
 h>tkck utcpf qp. h²4f twj^au. h²ro g | vgrp go dgtgm
 j quu | Ì v²4 3/4w. |^atv. qtn^apu | gt 2rlgp | . dcp^auqthc/
 rc gn v000

Mgo^an c p²ru | gt grp³4m ki c | k qwj qpc c | qpdcp
 pgo c o gu²u Mquvcpv^ar qn | dcp xqrv. j cpgo c |
 ucl^av. m²4n²4p nku x^atqu^adcp. Cpnet^adcp0 G | c |
 ki c | k dktqf cm c = kw ugo o k ugo go n^ang | vj gv k 2rgv
 ngugt r kmpcvk^atc. ^awo gpgv k dcnkngt^agtg0 Kv. Cp/

net^a dcp o kpf gp m. o kpf gp ul gi rrv c| gr^{3/4}m fleu u²
i²t n dgu|²r0 K^v 2t|k l»n o ci^av ki c|^adcp c n⁴ v^atuc/
u^a i k gr^{3/4}m0 G|v c xk^ai qv. cj qi { o quv^a m xcⁿu^a i i c n
vgtgo vgw0

Cpnetc c| gn w pgo xqrv u|²r x^atqu0 U v. p²o k
v^au^a ucn c|v ku o qpf j cvpk< pgo xqrv gi {^anci^ap
šx^atqu0 Xc^o k u|^a o qwgx dd. pci {qdd hcnpcm k/
rgw dg kpn^add c u|» gwt»rck 2²vgr²dgp0 šGwt»rck^o
2²vgr²dgp. o gtv j ku| gp pg hgrglv^am gn o²i ku eucm
f| uk^a dcp xci { vpmCpnet^a dcp0

C| Ā h x^atqu Mgo^a n^a ncpf» u|²nj gr| g0 C nku/
^a| ukck o gf gpeg dngl²dgp hgm| km c| Gpi Āk U w
o gmw0 U²r fgo dqu xkf²m gl< : 92 o²vgtg c vpi gt
u| p^g hgrw0 Cpnet^a dcp t²i k o²i c u| gr| uwm kf d n
gtgf uk x^attqo^a m= c j cvm cu. o²i²r x^athckm
n⁴2²r Āv c t²i k Cpi »tc. c| »x^atqu0 U km^a m o g/
tgf gmvgl²p²r Āvkw^a j^a| cmpci { t²u| g0

C o qf gtp Cpnetc c| Āx^atqu o^at uqmen n⁴g/
ngdd hgm| km c vpi gt u| p²j gl0 Mgo^a n uqm o qeuctev
eucr qncvq w rg. j qi { c j k^j gvgvgr^a Ān vgtlgu| rgr Ā
h x^atqu j^a| ckpcm j gr| gv euk^arlqp0 C u| mwctk| k o kf
cpnetck i {qtuxqev u| kpv pcr qvc j q| | c c| Ā v/
rgr Ān ngv0 C x^atqu rncukpcm u|^a o c 3; 44/dgp o²i
eucm 5: 022 h. 3; 52 n⁴Ān o^at 97022 rncuc xcp
Rcm^a m o qf go d²tj^a| cm o kku| v²tkwo qm dcpnqm
v ppgm gn u| kpv i qo dco »ftc c h²f d r0 O kpf gl v
Mgo^a n u| go²n² gu lgrgr^a vgr xct^a| uqnc0 gn c nqr^at
nku^a| uk x^atqud»r0 C t²i k šGpi Āk^o/d n Cpi »tc. gd/
d nCpnetc² uc v⁴3/4mn⁴ v^atuc^a i h x^atquc rgw0

C x^atqu»n o kpvgi { h²nt^ap{kc^a m O w| vhc
Mgo^a n u| ngdd qwj qpc. c eucpncck rncv0 C šrc/
ncv0 u| »v pgo nrm pci {qp nqo qn| cp xgppk< n⁴g/
rgu pci {u^a i Āxkn^a dcp rnkmc| gr^{3/4}m0

Qw. cj qn c| qtu^a i Āv Uxcu hgr^a xgl gv gr^a i nq/
r^at xkf²ngp. o ci^a pqu fgo dqp^a m c šrcncv0 i {
pgxgl km j kxcvncup c|^a ncpf» tg| kf gpek^a v0 C fgo d
ugo xc^o k o ci cu. o²i ku. tgo gm nk^a v^a u p{ k m c

o guu| g nkr^a| ulck u^fm^ai tc0 N²reu | gygu vgttcu| qm
 tgpigvi u| ^fpgu xk^ai^ai i {cn xgl gvgm rg c t^aeuqu
 rctmer vj q| 0 C| kf m hqn{co^ap u^ao qu nku r exkmp/
 u| gt j^a| ²r²Av c pci { rctndcp0 C| grp^{3/4}m ugi²f u| g/
 o²n| | gvg. vkn^atqm cm^{er}o c| qvem ngt²v u| gm u| cni/
 euqm rncpm kw0 Kv xcp c n^{3/4}v²tucu^ai k grp^{3/4}m vguv t/
 u²i²pgm r^{er}nj gn{g ku0 Tgo gm p^{3/4}u². hngvg. nq|^antw/
 j^au r| ku^av pk rgi²p{gm ut^a| u^aipcm c m²Av^{3/4}pd^{3/4} dg/
 l^atcvmp^an= n²u dd hgx^anq^wm g| v c vguv tu²i gv.
 dctpci {gptw^au. f^f| vgrgp. rcrqu co gtn^{er}k n^{er}vpc/
 ucrn^au uqtnevpcu^ai i c^{er}0 G| gm c vguv t^{3/4}m^a n^{er}pcm
 o quv c rctmer wdcp²u c| ²r²Av²dgl^at>»^ar^{er}0 P go uq/
 n^{er}p xcp^{er}cn0 C| c p²j^ap{ n^{er}vpc. cnk kw vgrlgu^fv
 u| qn^a n^{er}vq. c| ku k^{er}n^a dd n^av^{er}cv^{er}p o k^{er}vugo. j qi {
 c ugo rgi gu u| go r^{er}n u^ao^atc. c| v o wcuuc< c| grp^{3/4}
 n^{3/4}vpci {qp ngmx²f gpl0

C| ²r²Av²o c i c c rctm n^{3/4}gr²p^an^{er}0 U²r. l>n/
^arqn^{er} ngtvk Av xgl gv hgn c fgo d vgl²tg0 C rcrqv
 gi {gvgrp f^f| g c o ci cu. vtp{qu n^{er}vi t> c| gi {km qn/
 fcrp= gi {²dn^{er}pv uko c. o qf gtp h^{er}cm hqi cf l^am c n^a/
 vqi c>>v

C o²tgvm gi {^ancn^ap pgo pci {qn0 C h^{3/4}f u| k^{er}vgv
 r²r^awn o k^{er}f^{3/4}u| g n²v pci {qdd j gn{ku²i hqi r^{er}lc gN
 C| gi {km c hqi cf>u| qdc. kw hqi cf lc c| ^amco h xgp/
 f²i gkv. kw | cl^{er}pcm r^{er}/ c j^fgu n^{er}v²n{k guvk hqi cf^auqm
²u o gi dgu| ²r^{er}ugn0 C hqi cf>vgtgo n^{3/4}gr²p o^atx^ap{
 u| ^{3/4}m m²Av qplc c l>. j x^{3/4}u xk^{er}gv c| ^a| ulck hqt>u^ai/
 dcp0

Kppgp p{^fkm n^{3/4}xgvgrp²Av c| grp^{3/4}m f qni q| >u| qd^a/
 lc0 C u| qdc ki gp xk^ai qu= x²n^{er}p{ pcr u²Av²uv^a vgi ge^{3/4}
 o qf gtp h²i i^{3/4}p{^{3/4}m h²i i pgm c| cd^{er}cm^{er}gn w0 C n²v
 n^{3/4}2^{er}u cd^{er}cm n^{3/4}vk h^{er}t²u| gn w^am j^awen c xk^ai qu/
 u^ai pcm c| grp^{3/4}m f qni q| >cu| vcr0 C| ^f>cu| ven pci {²u
 ko r q|^apu ²r^fu 0 Cmc. n^{3/4}p{x pgo uqm xcp telc=
 gmgpdgp j k^{er}gvgrp²Av uqm²u u| ²r xk^ai. o gu²u rgt| uc
 xk^ai x^a|^analcp0 C| gi {u| gt netqu²m o^{3/4} ^{3/4}w. c
 ngungp{ h^{er}t²u| gp. rqr^{er}qp p²j^ap{ n^{3/4}p{x0 D²Av^{er} crki
 n^av^{er}c> g u| qd^adcp0 C| ^f>cu| ven o gmgvk u|²m c n^a/
 vqi c>>m t²u|²tg. ô d^at^a n^{er}cn^adcp^a npk ngm c| grp^{3/4}m
 lgrgp^{er}v²dgp. ô o²i j q|^a <šxki {^a | ô^a n^audcp0 C u| q/

uctnckdep ku p²j^ap{ u|²r. hgj²t ctc{hg^u2u r qo /
r^au netquu|²n0MPr ku cki xcp c hcrnmp0

Kv u| qnqw f²rgn w³pn²pv fqi q| pk c| gp³m0 M²
r³pdgp ki gp gi {u| gt gp ²r0 Oc ku c n³4 gr gu o »f dcp
²n rqi^at ²rgw »f¹a v n³4gw0 Hmg²r²u²pgm kf r qpv
dc x^anq| ». o gtv uqnev ²llgrg| kn0 O gi o quf km hgr³m³4
| km tgi i grk km w³pc l³p c f²rgn vk o wpnc0 O kplu| /
vgtgm tghgtgpugm nevpcvku| vgm l³ppgm cm³mnen c
j »pwm crw0 C vkn²t uqtdc lgrgp²k dg ngv0 C| gp³m
i {qtucp fqi q| km= vgo rgtco gpwo qu. i {qtu o gi lgi {/
|²ugk t^angt²Ap²gm c| ²Äi {kcvqntc< c| grk²v²|²u o^at
c x²i tgi clw » j cvcrqo fqi c0 C| gp³m j cmep dgu²r0
J cpi lc eugpf gu. o qpf cvk j quu| Äcm gri qpf q²uck ²u
ni kn²lc crcr qu hgr²r²u gn= u| gtgv cpcrk^apk xkev
nu| pk ²u ²txgmgn o gi i { | pk0 C f²rgn vk o wpnc^av
p{ Äkm c f²nw³pd. w³pc l »n gukm c| ²vng²u ²u gi {
nku r kj gp²u0

C f²nw³p ku o wpn²dcp vgrkm gr0 Kc|. jqi { c
n³4pp{gdd hclvc o wpnc o ctf f²nw³ptc0 C| gp³m
ki c| k šo ci^apwrc²l f qpcō c| qpdep wrc²l f qpn²r gp eucm
c| gu²lg< g| v Äi { tgp²gl k dg cj qi { cnetlc0 Pci {
w| uqpp^am kf qi^an²uqm xgp²i u²i < g| gm c j ²gu Mg/
o^ark gu²n= c| šcneugpf| ukknō o kpf ppcr qu o g/
pgvtgp²lg0 C dca²qm ²u o wpnc³tucm ²tng²l pgm uqt/
tc. Ko gv. Mgo^argf flp. U^aok t²i gddgp Hvj k ²u
Mlc| ko 0 Eucn0 cm ³dqtpqm ku dk cm cu go dgtg c|
gp³mpgn0 C xgp²i gm c hcn o gmw^am » n²p{ gm gu
Ä²uj gn²gnp j gn²gl ngf pgm gr0 C| gp³m o kpf gp dg/
lgrgp²u p²mÄn j kvgrp dgr²r = xgp²i gk hgr²m²uucn Äf/
x³4 rkn0 C| ³p c l » j cpi wrcv hkpqo v³4³m dqt gm quuc
c o gtgxu²i gv= c dca²qm n³4xgvgrpÄn o grgi j cpi qp
dgu²ipk ng²l fpgm c pcrk gugo ²p{ gnt r0 Rqrkknck ²u
Xk²i gugo ²p{ gm gi {²pk go r²ngm ngt²Ap²gm u| p{ gi tg0
C rj^atdc Äcdd kcn ngtÄn< c| guk ³au| gl³4xgvgrm
i {cntcp c| ²llgrdg. u v c xk²i qu j clpcndc ku gp{Äf/
pcn0

Mgo^an p²j c šj^a| kd^amqnevō ku tgp²gl 0 C v³4³m
l²thcm o²i j Ä »fpcm c ³pew²n ²u o gi kpv eucm M²
r³p xgt fpgm c p m²u m²Ä³p c l²thcm= c| gp³m u| g/
o²n{gugp r²r qfc c d^angtgo dgp c l²thcnj q| ²u xku k

ngv c r^ap{qñj q| v^apeqpk0 J c r g f k i x c r c o g n { k m
nup| g t x c v^k v^{3/4} p x g p f² i v^Àn^a i q u c p u l g o² t o g u
^{3/4} g v d g p l g r g p k m o g i . c | g r p^{3/4} m p² j^a p { w f x c t k u
u l » m^l t g v² d g p . u c l^a v n g | r g i x g u l k r g t » r c c j c l^a v g n[/]
v c n e t » l^f v^f r v c x^a m w n e v v c n e t » d g r^f r v 0 C | g p g
o q u v o g i u l » r c n² u c | g r p^{3/4} m g n u p g m^a m c r c t n g w t g .
h q z t q w q | p k² u v c p i » | p k 0

Q f c r g p p c | g o g r g v p . c j^a n » u l q d^a m h c r c k o² i r^a v[/]
v^a m c | v . c n k o k p f g | v v g r l g u g t g l² d n g m g p g | v g² u c n k /
p g m g m g p x² r g o² p {² v ô u l q n^a u^a » n g n² t g p ô M g o^a n
k w / q w o g i k u j c m i c w c 0 C e u c p n e l c k r c m q v r g i g n u
² x g k d g p g n / g n r^a v q i c v q w k f g M g o^a n c | » v o^a t
t² i g r j c n v² f g u c p { l c k u 0 C l^{3/4} f t g v t^f g w x^a p n q u q n u p
Ã f^{3/4} 2 r k g š u l k f c ô h k^v < p g² l u l c n^f | | q p . p g n^{3/4} p p { g n[/]
o u n^{3/4} l² m² u x k i {^a | | q p l q d d e p g i² u l² i² t g 0 C j c /
v c m c u p^{3/4} k² u . h g j² t t w j^a u . l^f r k i x c m^{3/4} g i c u u l q p {
m^À n^{3/4} p^{3/4} u g p p g j g | v g r v H k n l k g J c p w o t c . M g o^a n g i {
v^a x q r k p t q n u p^a t c . c n k j g | c | g r p^{3/4} n^{3/4} v ô o k p v E u c p /
n e l^a d e p g | o^a t n^{3/4} w f q o^a u^À ô i { g p i² f u l^a r c m h /
| k n 0 H k n l k g g i {² d n^f p v² r r g p c | g m g p n g | l g N e v k^f
J c p w o p e n c u l g t² p { . j c p i v c r p . c n e t e w c r e p c u u l q p { 0
M^f p { g m g u . g i { u l g t v g t g o^v u < q n { c p . c o k n { g p M g //
o^a k p c m² r r g p n g f x² t g x c n 0 G | c u l g t g r g o u g o r g u l
c | q p d e p v t w u c H k n l k g² r Æ { p g o k i c | k² r g w^a t u
M g o^a n u l^a o^a t c . o k p v N e v k^f² u c | w q n »² x g m I^{3/4} n /
e g p l g u g o 0

C | g r p^{3/4} m c | q p d e p x c n d e p p g o x k i {^a | o c i^a t c .
g i² u l² i² t g² u r k j g p² u² t g 0

G i² u l² i² k^a m e r q v c v^{3/4} d u l^{3/4} c f q n q v c i i q f c m q o /
t c 0 C h q t t e f c m q o² u c i^{3/4} 3/4 / v^{3/4} 3/4 m j^a d q t Æ k i e n
o c k c h k k n e k o g i g t n g v² u g m u q t q | c v c . c u q m k f g i /
k i e m q o c r e r q u c p o g i x^a n q | v e w^a m c | g r p^{3/4} m m^À n g l² v 0
C | g i { n q t k h c v c n n e v q p c v u l v r g p u l n g j c l e n k j w n q w 0
H e l g d Æ l^a p g i { g w g p u l^a n j c l e u k p e u g p 0 G l^a n c n n q /
r q p {^a l c d q n q | c v q u e d d . u l² r g u g d d d g p { q o^a u v n g n 0
U l g o^{3/4} f^{3/4} n g c | q p d e p d q | q p v q u e d d . o k p v x e r j c . n^f v
m^À n u x² i g g i { t g l q d d e p h e r h e r^f * k g r 0 C r e n l c . c o g n {
c i^{3/4} 3/4 / j^a d q t Æ m k f g l² p g t u g p o g i h q i { q w . o q u v c /
p^a d e p Æ t c o g i v g n 0 L³ t^a u c r c u u^À t k n^f p o q u q n { q i 0
C t e d t² v o g i e u g t | g w c c | c p c w r c k u l^a t c | p e r u^À v² u .

O q i^a u^a d e p o^a t x k i {^a | c |^a m o h n k o² t u² i² t g² u²
 o² n² u^a i^a t c 0 " n^{3/4} g v g ã p p g r² n { g u c m e r o c m u t h e n g v g
 | u c n g w i { c n t e p f² r g n w k u h c m m e k k p f g t. h g j² t n k /
 n g o² p { ¶ g w k p i o g m g r o T g p f l g r g n g v p g o j q t f. n e /
 v q p e t w j^a d e p c r i k i r^a v p k 0 C j² v n^{3/4} p e r q m^{3/4} g v g
 u r q t v t w j c = c p i q m u u | c d^a u. m u e n^a u. x c i { e u k n u q z /
 h q t f k o k p^v m e r o H g r v p g p u q m | q t j q t f l c c | g r p^{3/4} n
 c o^a t n k u² t² i k o » f l p e m j c w » h g r^a m ». x k u u | c j c l v w
 u c t m ã u | k o r r e. n g o² p {^a m » i c n² t v 0 U r q t v j q | . c w w » /
 v ã^a n j q | k u o k p f k i u r q t v | g t g p^{3/4} n k 0 H ã^{3/4} f p k
 u t e p f t c k u i { c n t e p² u u | ¶ k g u g p l^a t 0 M k u h ã^a f p e f /
 t^a i l^a d e p i { c n t e p n g h² p { n r r g | k m c p g o | g w n^{3/4} k r e r q m
² r g o g u t k r q t v t l g k 0 C r e n l c ô k n { g p n u t r^a v k ô o^a t
 p g o q n { v g r v² u p g o q n { k o q u. o k p v t² i g d d g p 0 X^a n /
 r e k e u c r | q w e m p { c n e g r w j w n 0 F g c t² i k k o q m p { q /
 o c k v o² i o c k u h g n g j g v k u o g t p k 0

C e u c p n e l c k² r g v o » f x c n » d e p j c l u | q r v² u v ã^a /
 | q w 0 C v ã^a j c l v w o v p n e. h^a t c u | w » k f g i² r g v. ² l u | c n^a /
 |^a u q m c j k v g r p w c | i c^v u q m k p^v | o² p { g m k u n u r^a m
 i {^a t e m^a m e p f » r^a v q i c^v u c. v^a t i { c n^a u q m^a n e r^a d e p
 o k p f g p d g p x c n » t² u | x² v g n g t u g p o g i x k l u g n g g | v c
 o c i^a v p g o n^{3/4} p² n g o d g t 0

C o k v M g o^a n c | w q n » v ¶ | g u | v g p f d g p c m u v q w.
 ¶ | p g o | g f² n p g m k u g r i u² i g u r g w x q r p c 0 P g o e u f c.
 j q i { c e u c p n e l c k ô k o o^a t p g o h c v e n ô h^a t h k g i { /
 t g o g i x k l u g n g d d n r r g v o w c 0

ZZKZ0š C0v^{3/4} n^{3/4} m c v l c 0 0

O w u | v h c M g o^a n g i { k m u c l^a u^a i q u v^{3/4} x² p { g c
 n^{3/4} g v n g | 0 G r t g p f g n g. j q i { o k p f g p v^{3/4} n n^{3/4} g r u
 e u c n^a f k p g x g v h g r k g p p k 0

C v^{3/4} n^{3/4} n p g m c f f k i g i { u | g t g p p g o x q r v p g /
 x ã^a n 0 J k u | g p ¶ | { r g w š O w u | v h c ð n e f g w k u c p p e m /
 k f g l² p .. M g o^a r ð 0 C | w³ p. c o k n u t c j k c e r q u t e p i /
 r^a v^a p v^a d q t p q n k t e p i t e g o g m g f g w. O w u | v h c M g o^a n
 š r c u c ð. x² i ã^a n š I j^a | k ð O w u | v h c M g o^a n r e u c. c o k /
 n u t š i { | ð r g w c i^{3/4} n^{3/4} h^{3/4} u x² i ã^a n o q u v

c| Àl v̄4x²p{ o gi cmqv̄ u^ap^an O wu| vhc Mgo^an Àtc
o gi x^anq| vvc pgx²v̄0

C| Àl v̄4x²p{ o gi cmqv̄ ucñqt c v̄4³⁄₄m qtu^ai/
i { r̄u O wu| vhc Mgo^a r̄pcm c| šCvcv̄Ānō. c šV³⁄₄/
n̄³⁄₄mCv̄lcō pgxgv̄cf qo^ap{q| v̄0

C pci { o dghgl| f³⁄₄v̄0 C nqtqp^av hgn̄gw²m c
i ki cpvk̄mw go dgto wpn̄t̄c0

̄i { ku xqrv c| tgpfl²p0 O wu| vhc Mgo^an o quv
o^at xcn̄dcp c v̄4³⁄₄m p²r crlc0 O quv co kn̄qt c dk̄vqu
jvcv̄qo dktv̄m̄dcp ²r̄0 xcn̄dcp pgo o^au. o kp̄v
cv̄c0 Gi²u| p²r²pgm cv̄lc0 D^at o²i wqñ» ²xgkdḡp
ku ngn̄gw m̄f̄fgpl̄g o kpf̄c|²tv. co k̄tv gffki m̄f̄f³⁄₄v̄0
J ku| gp o²i 3; 52/dcp ku. co kn̄qt r̄gfki o^at t²i gu²/
i gp c| gi²u| qtu^ai gr̄kuo gtv̄ c v̄4³⁄₄m p²r l»ngx l²/
pgm r̄f̄c^au Āv̄³⁄₄g hgn hgl²v gngpg0 Xc̄rco k x^apf̄qt.
xcn̄uqu r̄t»l²v̄c j k̄f̄gwg. c v̄xq̄rk j gi { gn̄l n l xg. c
t²i k gn̄go gvgw xk̄f̄i ki c|^av̄0 C| gi { km kn̄gp u| »pqm̄
r̄vc cm̄m̄^axcn̄ gi { ngo^ar̄kvc v̄4³⁄₄m n̄v̄qpcv̄ku| v gn
cn̄tv̄ v̄xq̄r̄f̄cpk c h̄p̄cv̄k̄mw ugn̄gv c| go gr̄x²p{t n
fg pgo uk̄ngt̄Ān̄0 U v c x^apf̄qtr̄t»l²v̄c. p²j^ap{ r̄ngmu
j^ax²xgn c v̄4³⁄₄m n̄v̄qpcv̄ku| v̄g n̄t̄fl^axcn̄ ¶ gnt̄g xci/
f̄cnc. ô qw. c nk̄f̄| uk̄ckv̄³⁄₄o gi u| go gr̄f̄ v̄²t̄c0

G| c| gugo²p{ cf̄v̄c o gi c l̄gr̄gv gi { Ālcdd r̄f̄c/
f^aut̄c0 G| xqrv Mgo^an Cvcv̄Ām wqñ». ki c|. j qi { nk̄/
ugddh̄lc̄v̄ gt r̄t»d^alc0 C r̄f̄c^au c| qp̄dcp uk̄ngt̄v̄ngp
o c̄t̄cf̄v̄0 —l̄tc gi { uqt h̄gl j w̄m̄q̄v̄ c r̄qt̄dc ô ²u o quv
o^at V̄³⁄₄m̄qtu^ai dcp o²i c| gr̄f̄i gf̄gv̄gp̄t̄i ²u t̄gem̄
el̄» u| gr̄g ku gp²o w̄n̄0 C n̄f̄l̄²tv̄ḡm o gj̄gv̄gm xku| c
n̄tk̄v̄kn̄dc0 O quv o^at o kpf̄gp̄nk̄ r̄f̄v̄c. j ku| gp gr̄gi gv̄
²rk̄g| j gw²m c ngo^ark̄ t̄gh̄qto qm̄^ar̄f̄a uckv̄ c| w̄»ddk
²xgm cr̄w. j qi { pgo c jvcv̄qo dktv̄m̄uc c|. co k̄tv
Mgo^an Cvcv̄Ām cr̄t̄t̄gp̄f̄gn o kpf̄gp̄v r̄qr̄k̄n̄l̄c o gi xc/
n̄»f̄f̄^au^apcn̄0 C| wqñ» t̄g| i²ugm ku gr̄o Āncm V̄³⁄₄m̄/
qtu^ai xk̄ḡp0 Mgo^an Cvcv̄Ām o²i xc̄rco kv̄ o gi n̄f̄/
u²t̄gn̄< c n̄r̄xk̄ugn̄j^a| dcp gngp|²ngv̄ cn̄tv̄ cpi qn̄
o kp̄v̄t̄c r̄f̄v̄t̄ḡj̄q| p̄k̄0 C| gngp|²nk̄ h̄gn̄l̄»r̄n̄f̄uqm̄ c| qp/
dcp n̄qto^ap{r̄^atk̄ t²u|t n qn̄{cp d̄q̄v̄^ap{qm̄lc̄ h̄w̄/

rcfvc m j qi { x²i Ān ku l²rki p_gx_gx_g. l²rki dquu|cpnuf//
xc. ¶ { n²k²nqwhgnCvcvĀm

ô V^{3/4}3³nqtu^aidcp o c o²i pgo o n²4jgv gn
ngp|²n#

Kc|c ku xqn0 V^{3/4}3³nqtu^aidcp cmqt o²i xcn/
dcp pgo ngjgvw o^aun²r nqto^ap{q|pk o kpv CvcvĀm
u|go²n²xgn²u gu|n²4gkxgn0 C tghqto qncv o c. c| g|gt/
nkngpeu^a|jcto kpecu²xgnldgp o kpf gpnk fleu²tk ô
r^at²xg o²i o gi cnet^vm²tvgn²4g|pkCvcvĀm²40

Oquv o^at o kpf gp uko^ap o gpv0 C|qtu^aii { r²u
l>n qrelq|qwcp vgrlgu|lgwg c|v c hgrfcv^v. co gn|
o kcw c|v Mgt²k²ngvgtj ¶kvc0 Vgto²u|gvu. j qi { c eug/
eugo nqtv²n v^{3/4}3³m rctno gpv. pgo hwpnekp^aijcv
o kpf¹tv Āi { . o kpv c pci {o ĀvĀ rqnk²ck jci {qo^a/
p{qmn d¶» gw>rck rctno gpvgn0 J ku|gp c| gn hgn²/
vrgm j²p{q|vc m gj j gl 0 C rctno gpv o²i / gmmqt pgo
ngjgvw c x²ngo²p{²u gmgpx²ngo²p{ i qpf qu nkeugt²/
r²u²pgm u|¶j gn|g ô fg ngjgvw ngi c²dd u| t²u qn|
nkntk^vn{quqf^auk rqpv. co k c o ci cucdd²u vku|wn/
vdd l³k Āv^agi {gpi gv k o clf 0 J c²cf^au xqn/g c|qp/
dcp o^at gl ku c o Ānj q| n²r guvA J c²cf^au xqn0 M²v
u²i vrgp. jci { gl c rctno gpv o²i o kpf ki lqdd xqn
²u jcuqpn²ij cvvcpwn o qf gtpgdd cpp^an co kv Cdf wn
J co k² o clf Gpxgt p_gx_g|vgm cmqvo^ap{pcn0 V³dd/
tg. gddgp ku ki c|c xqn CvcvĀm²ngm c|qtu^ai cmqt
o²i pgo xqnvg²i²tgw0

Eucpnelck rcm^vl^adcp o quv o^at²ngv o wpn¹lc
fg²p. xk²i u|gtv vku|vrgvdgp. grkuo gv²p²rk per lckv
c|gp³4n0 Gi {o ci^adcp²n kv. euc²flc. det^avck fg
gngpu²i gk ku rucp gro c²cfvc m o gm ng0 Ugo hrgu²i.
ugo²fgucp{c. ugo²fgucrc det^avk o grgi u²ig pgo
cfcvqw o gi u^ao^atc0 Gi {kmĀm ulpeu o^at c|²n m
uq^adcp0 I {gto gmg²n ugo^arfqwc o gi c| Kvgp0
Gi {gf Ān²v²pgm gi {gf Ārk gp{j ¶v k c|qm c| gzv²cxgt^v/
n>f» u|»tcnq^auqm co gn|gndg u|cdf »t^ak dcp hllgn
xgk dgrg o ci^av0 M²w²i vrgp. j qi { uqnenpcm ngi h /
n²r gp qtxquckpcm u|go gv u| t gl c|²ngvo »f. cj qi {
Mgo^anCvcvĀm²ngv wqn»²xgk/dgp Eucpnel^adcp²n0

Cmqt. co knqt j cvm cu dtqp|u| qdtek o^at U| vo dwn/
 »n Cpnet^aki qw d[~]u| n[~]mgf p[~]gm c x^atqu rgi n[~]go gmg/
 f dd jgn{gk0 Mgo^an Cvc[~]Am pgo xki {^a| gi²u|/
 u²i²tg0 | lu| cm[~]| km xk[~]tcu| v. ku| km²u per qpvc j cl/
 per dcp ngt[~]An^ai {dc0 Xk^ao v[~]tucu^ai d[~]r0 Gt u vgt/
 o²u| gv[~] kn{gp²rgvo »f o gmgw gi {tg i {³pi [~]An0
 Go dgtk[~]gi xku| qp²vj gv. jqi { Cvc[~]Am o quv o^at
 ki {gmu| km nkj cu| p^arp^k ci {qpj clu| qiv²rgv wqn[~]» rg/
 jgv u²i gk0 L[~]n w[~]lc. jqi { u[~]An{qucp dgwi²u pgo
 hqi o^at uqⁿ²rp0 O²i ugo jcmi cv qtxquckc. dca/
 vktc0

C| gi²u| go dgt pgo v[~]dd. o kp^v ³/₄xgpj²v²xgu0
 O²i uqm gu| vgp^f rgi gvp^g j^avc u|^ao^atc0 C| qpdc^c
 uqtu n[~]p{ x²dgp o^aun[~]r v[~]m o gi Mgo^an Cvc[~]Am
 nk[~]o gv²v0 C| v c nk[~]o gv^v. co gn{gv o²i Mgo^an c
 pci { gp³/4nugo w^fqwo gi x^anq| v[~]pk0

Cvc[~]Am wqn[~]» j »per lck^v c h[~]vcn^ai ³/₄³/₄m hqt/
 t^au^axen n[~]k^aplc gp{j v[~]gk0 | rvg wqn[~]» rgt^{e2}ki qw
 xqncm o gmgw^g hqi cfqw r^ap{ck0 G| gm n[~]4[~]An U| cj kd
 I ³/₄n[~]egp. c rk[~]»cp Cvc[~]Am n[~]g^fxgpeg o quv o^at
²xgm »v0 Pci { vku| vrgwgn d^apkm g| c Ncv[~]k[~]tg jc/
 uqp[~]» h[~]vcn n[~]p{ ³/₄³/₄mlghqi cf » cv{l^axcr0 P{ k[~]x^a/
 pqu^ai gn w o kpfki n[~]g| g[~]ve[~]n[~]qn pgnk[~] o²i kn{gp
 l[~]p{n[~]r gm ku n[~]u| [~]Ap[~]gm c p{ k[~]x^apqu^ai u|^ao^atc0
 U| cj kd I ³/₄n[~]egp qw ²n Eucp[~]nc[~]l^adcp. cjqn Cvc[~]Am
 j^a| vct[~]v[~]uc gi {tg lqddep c pci { ^amco h w^fxctvct/
 v[~]u^apcm lgn[~]i²v ³/₄nk hgr0 Mgo^an Cvc[~]Am o²i ²rgv
 rgi wqn[~]» per lckdcp ku uq[~]ev fqi q| kn0 O²i o kpfki
 vrg xcp g| gtp{k vgtxxgn vggpf xgr0 Fg v[~]n[~]p o^at
 w[~]lc. jqi { o kpfgtg pgo rgu| kf 0 C rgi pci { qdd
 ci i »f^au[~]cn c| qpdc^c c| v[~]nk gn jqi { w[~]lc. jku| gp
 per jqu| cv v[~]ti {cn c m[~]An[~]4[~]f k²u ucl^av fkr[~]qo cv[~]k[~]cn
 jqi { c xk[~]i jgn| gv o c. 3; 5: /dcp o^at gi {tg lqddep
 tqo rkn0 L[~]n w[~]lc Cvc[~]Am c| v ku *grgi gv n[~]vq[~]w c|
²rgv d n²u c v[~]4[~]v[~]pgngo d n[~]. jqi { c Jcto cf km Dkt/
 fcnqo ²u c| cpi qu|^au| ^amco u| ³/₄xgu²i n[~]4[~]4[~]w c|
³/₄u| g[~]An[~]4[~]2[~]u o quv o^at crki ngt[~]Äj gv gr0 V[~]4[~]3[~]nqtu|^a/
 iqv gddgp c n[~]tf²udgp h n[~]r Qtqu| qtu|^ai ^an[~]u/
 rqpvc ci i cu| vlc0 V[~]4[~]3[~]nqtu|^ai Mgo^an Cvc[~]Am
 crw o kpfki l[~]» dca^au^ai dcp ^anq[~]w g| gn c u| qo u|²/

fqu jcvwqo o crk Mgo^an Cvcv[~]Åtm wqñ» cnetcvc.
 jqi { Kō gv k³p[~]Åk ô o gtv glv c pgxgv xgwg hgn c|
 gi { nqt k³p[~]Åk j u ô . Mgo^an dct^avc rgi { gp c| ²n
 |^anqic eppcm jqi { V^{3/4}³nqtul^ai co gffki vjgk
 cpiqn ²u qtqul dct^av rqrkkn^av hqi hqn{v[~]p[~]k[~] Kō gv
 ul go ²n{g grⁱi dk[~]v[~]u[~] m gttg⁰ G| c rqrkkn^e vto ²/
 ul gvgu ku. o gtv V^{3/4}³nqtul^ai h^{3/4}f tcl| k ul qo ul ²f[~]u^ai^a/
 dcp pgo c p²o gv hgi {xgtgu gt . fg c| qtqul ²u cpiqn
 jcfugtgi^a n⁰ Gw n c| w[~]p h[~]Åi gwgp o kpf gp xkⁱi/
 p²|gk n[~]tf²u ku⁰ V^{3/4}³nqtul^ai tqn[~]pu[~]l gpxg ku qfc
 j[~]Å . cjqn tqn[~]pu ul qek^a rku ²u^a mco hku[~]l » hck grkngv
 x²n hgrkuo gtj gvp⁰ Ngj gv [~]mpk lqddtc ku. derte ku
 V^{3/4}³nqtul^ai rqrkkn^e dct^au^aick hgrgw< c| c| qpdcp
 n[~]u²i vgrgp. jqi { V^{3/4}³nqtul^ai O wul vhc Mgo^an crw
 o^at uqj c v[~]ld² pgo n[~]xgtgf gw j^a dqt[~]Ådc⁰ | u gddgp
 n[~]u²i vgrgp[~]Ån l » t²ul g xqn c| ^an[~]epf » ul qo qt[~]Å xkⁱi/
 j^a dqt[~]Å vrcul vrcvqmpcn⁰

V^{3/4}³nqtul^ai qv Mgo^an Cvcv[~]Åtm »xc o gi cw»n
 jqi { Åtc grkpf w[~]lqp c| qp c o g[~]tg[~]gm Å[~]qp. cj qpp²v
 gi { nqt Qtnj^a p hglgf gno kpf wv gn Å l^{3/4}f vt[~]Å[~]vgm
²u p²r gm o gi j » f[~]u^atc⁰ C ngo^ark v^{3/4}³nqtul^ai pcm
 pl[~]eugpgm kō rgtk[~]ku[~] v[~]mw e²rlck ²u x^ai {ck⁰ U v.
 gngpnl rgi. n[~]4³/_o d³u²i gv o wcvqw o kpf gp vt[~]Å/
 rgi { c[~]tr[~]u[~] k^apv⁰ Co knqt vj^av c| crgzcpftgw[~]gk
 ul cpf| u^anqv. ul cd^an{qu p²ru[~]l cxc|^au Å[~]ap. c P²ru[~]l ^{3/4}
 xg[~]u²i V^{3/4}³nqtul^ai pcm [~]ng qfc ²u c v^{3/4}³m eucrc/
 vqm Crgzcpftgw²dg dgxqp[~]w[~]mc[~] gl wi {cp l » rgu ²t/
 |²u xqn c v^{3/4}³m^a mco xgl gv pgm c| qpdcp m[~]Å[~]p^{3/4}
 ugddgp gi { gwgp hgrgn u o k[~]ku[~] vt[~]v. xci { v[~] dqt[~]pqn[~]v
 ugo ²tlp[~]gv⁰ Uqmen hqpv[~]qu[~]ddpcm v[~]t[~]v[~] c o q/
 fgtp v^{3/4}³m rqrkkn[~]u c| v. jqi { dgu ²u v[~]t[~]u ul q/
 ek^a rku tgh[~]to qmen c| gr^{3/4}g[~]pf v^{3/4}³m pgo | gf²np[~]gm
 d²n[~]u hgrgo gm[~]gf²uv dk[~]v[~]u[~]u[~]p⁰ C l^{3/4} gppgm c|
^a m[~]ur qvpc[~]mf qwki c| cv⁰

3; 5: ul²p o^at Gw[~]r c o gi tgo gi gw⁰ Vgt[~]Å[~]gk
 x^anq|^a uqm^a mco qm o gi ul p²ug rwun[~]erqtqu ul ci i en
 v^{3/4}³vg o gi c| cwo qu l²t^a v⁰ C| gw[~]r ck hcvn^ai
 o^at wfj[~]cv. jqi { Åtc c xkⁱi m[~]Å[~]p^{3/4} eucv/

o gl kp qpj cvlc o clf x²t²w Qw dk ugti gw o ct
o kpf gpnk ul k²pgm tglvgn²dgp c| grl^{3/4}gpf cr qnc/
rkr vkwu o gi rt>d^anc^vuqmxkrc o qu xgu²n²g0

V^{3/4}qtul^ai c| qpdep pgo gpi gf vg dg jcv²/
tclp gl v c xkfi tgp²u0 Cvc²m d²ngn²to^ap{c
Àtc xli {^a|qw0 C v^{3/4}m p²r cv{lc pgo gpi gf vg
qtul^ai^adcp c j^adqt²u r qnk²|^auv grj cvco cuqf p²0
O kpj c ugo o k ugo v^{3/4}v²pv xqrc 3; 5: ul²p. d²n²u
rctrc o gpk x^arcul^vuqntc n²u² Av V^{3/4}qtul^ai 0 O kp/
f gp Ài { o gpv. qn{ ul²o^ap²u |^{3/4}m²gp o gpvugp. o kpj c
c rgi fgt²ngdd²i dqrnx^atp^a c| gwt>rckl^{3/4} w0

Ⓜ Gmqt v^{3/4}v²pv. c rctrc o gpk x^arcul^vuqntc
w²p t^{3/4}k²f fgn jqi { Mgo^ak Cvc²m u²qncp o gi/
dgvgi gf gw0 C eucpnc²ck rcm^vp n²k²Àn ugnk ugo
w²vc. jqi { c v^{3/4}m² cv{l^apcm dvgi u²ig o k²gp
u²qncp0 C| qtxqu²m²u rcm^vcdgrk²m c| qpdep n²w²m
jqi { c jgn{ gv n²cul^vql²rku0 C o^al²u c o²i dvg/
igdd xgug o n²4²ug pgo vctj cv o^at uq²ki 0 Fg
Cvc²m gn w o²i ku vkn²pk n²k^ap^vm c xcn> jgn{ g/
vg0 Cvc²m c| qpdep pgo jkwg gn c| qtxqu²m o gu/
vtn²f²u²0 L>n w²vc. jqi { c| qtxqu²m cv>n h²rgm
jc o ci c ku o gi w²lc. jqi { o gpj gvgv²< cmqt
o²i o gi o ctf v ngm²gtglg²u gmg^am>n²r gu²ig ku
gr²u²0 i { vj^av wqn> rgt²ki Ài { vgw Cvc²m
o kpj c pgo xqrc wul^vdcp^amer qvc u²qncp^ai^axcr0

Eucm K o gv K^{3/4}p²Àxgn rgi dk cm cu²dd det^av^axen
dgu²n²p²i { ul go n²4 v ul kp²p0 vn²k^apv w>f^apcn0

Ⓜ C| À v^{3/4}m qtul^ai i { n²u^{3/4}u g²À²u²pgm pcr l^ap
Mgo^an Cvc²m o²i^ai {^adcp jcm jcp²qp fkn²rc
À gpggv m²À^{3/4}v c|^{3/4}u g²Àn n²r xkugn j^a|pcn0 Co k
nqt c| w²p c| cpnc²ck rctrc o gpvdp c| gp^{3/4}m cr/
euq{. fwt^ap^aeuq²vc hgo gr²p{gp hgn²rcuc c|
^amco h À gpg²v. co gn{ ku²v d²n²t n ul qe²rku jc/
rcf^aut>n ul >n²w ô c| gwt>rck | t|cxt ngm u n²4 g/
r²p ô c v^{3/4}m n²r xkugn m jgn{ Ànt n hgn²rc. gi {/
jcp² À²rgp²udg v^{3/4}vgm nk0 O wul vlc Mgo^aipcm o²i
o gi xkw²m p²r ul gt u²i²pgm gl v c| Àcdd o gi p{k^a/
pw²u^a0 C| Àlppcp o gi x^arcul^vqw rctrc o gpvdp

wi {cpku o quv c| gnu ememqo o cn Āngm c p²r k nkugdd/
u²i lkm mĀf^{3/4}gk0 ¶ { c| Ā rctico gpvgv CvcvĀm o kpm
gi { gt rt»d^apcm vgnpvgwg ctcp²|xg. ki c| qrlc/g c
o ckgi²u| V^{3/4}3/4mqtu^ai CvcvĀmeugrgmf gvgkA

Mgo^an CvcvĀm j cr^amq u^ai {^ap j cmqwc o gi ô
g| xqrv cr^ap c| wqn»^{3/4}3/4j ¶ u^ao^atc ô . jqi { c|
Ā.u| cdcfcdd^{3/4}u| gv²vgn rctico gpv ku rgnmgup o gi/
vr uqnc0 C l» j ¶ x²vrg w^ap CvcvĀm o²n^a m^aqo dc
o gtĀn0 Dk qp{^atc o gi p{wi qfxc^am qf qw ctt»n
j qi {²tfgo gu xqrv² rplg0 Cte^ap. o kpv c n^{3/4}4Ām m
o qpf^am j quu| Ā^am c crw o kpf x²i ki o quqn²u
fgt vĀnt^{3/4} f^{3/4}0

Pgo uqn^aki vctvqw c| wqn»^amqo 0 G| crw
v^{3/4}2 pv. jqi { hqi cfqw r^ap{c. c hxcvn Ncvk²tg go/
r²ng| vgv U cj kd I^{3/4}negp xcrcj qn v^axqndcp. rgl vj cpv
tgr Ān i²r²xgn0 G| c hxcvn u| ¶ x²j g| p w rctcu| vk
uqtd»n Mgo^an o gn² ngtĀv r^ap{ c Dcm^apt»n tgr Āv
j c| c. ucl^awo ci c xg| gwg i²r²xgn0 O qqtj kdc o kw
r| vj cpv²u u|^{3/4}p{gvj cn0 K dgp²rrgp cmqt. co k
nqt^{3/4}3/4ndghqi cf» cv|lc wqn» jcte^av x²kv c j cr^an
rn0 C hxcvn r^ap{ j cr^amqcp u| gtgw c|^{3/4}xgpp{qre/
²xgu CvcvĀn^{3/4}0

ô Pgo hqi qo vĀr^arp k c| j cr^an^av ô o qpf q/
i cwc o kpf ki U cj kd I^{3/4}negp0 C v^{3/4}3/4m p²r n^{3/4}4 v ku gn
vgtlgfv c| c j ¶. jqi { c r^ap{ o gi^{3/4}p² o ci^av. j c
CvcvĀnpgmdclc gup²n0

U cj kd I^{3/4}negppgm pgo ngn^agw o ci^av o gi^{3/4}p²g0
C uqtu eugrgmf gwj gn gwg0

Co knqt c eupnclek pci {dvgi^ai {^av n^{3/4}4Ām m
j q| gr²tng| gw c j ¶. jqi { U cj kd I^{3/4}negp r| vj cpv.
xcrc gpp{ kcp p²o^ap^{3/4}u| gp²| vgn0 C l»urcv vj^av
dga^an0

C i {^au| j ¶vc j cr^aqm» uqj c pgo ku wfvc o gi 0

3; 5: pqxgo dgt ;/2 p. tgi i grk nkpe »tc^{3/4} rgte/
nqt. Mgo^an CvcvĀm c v^{3/4}3/4mp²r cv|lc o gi j cn0

i rgo xg c| qpdep vxa^add²n0 U k^atfcp o gi cr/
r q| v²u hgr²r ¶ gw c M^{3/4} v^atucu^aik V^{3/4}3/4mqtu^ai q0
V^{3/4}3/4mqtu^ai gn wg u^a|^{3/4}xgp²xgp^av Gw»rc n^{3/4}4/

o qpf^a uqu šdgvgi go dgtgõ xqn0 Ngi crñ dd ku c vgtlg/
 fgn² dgp o²i o lpfki jcvcm cu fg u| gtxgl gvkgi . p²/
 rkgi nqtjcfv²u rucp u|²vjwm» u| wv⁹pk V^{3/4}3/4nqt/
 u|^ai0 Mgo^an Cvcv[˜]Am v⁹o cu| vqwc hgn c jcrf qm»0
 T^{3/4}klf v| gpjcv²x crw²xu|^a| cfqmen xkvg gn tg
 p²r²v²u²xu|^a| cfqmo wrcu| v⁹u^avj q| vc dg0

*Ogi i { »i { ¶ qwc c o^at jcrñ nqcp šdgvgi go/
 dgtvõ0 G| c vgrgu[¶]o²p{ ki c| k euqfc0 C o ck n^{3/4}v⁹t/
 u^aik V^{3/4}3/4nqtu|^ai gi { gf[˜]An Mgo^an euqf^alc0 Pgo | gvg
 rgfki u| k⁹tfcp jcrf c Mgo^an o gi lgr^{3/4}ng hergo gmg/
 f²u [˜]M^ap²u c d²n⁹u qtu|^ai²r[¶]v²u vx^add hqn| km c|
 u| gmgo²dgp0*

M· U · PGVP[KXfP~VfU

Mgo^a n Cxv[~]Am² rgv² pgm »tk² uk ktqfcm c xcp0
 G|gp c jgn|gp c|qpdep. c hgijcul p^anv hqtt^auo w^pnc/
 nup nkx[~]An ulgtgp²o o²i p²j^ap{ nkx^an» qtlgpvc^{ku}a/
 pcm wf»upcm²u n³4²ngk l²thk[~]pcm m[~]n³p ku o gi/
 n³4^u 3^ppk c|qncv c| cf[~]cvqncv co gn|gn^v n³4^p{xgo/
 dgp hgijcul p^anco²u co gn|gm hgmwcv^uc c|²t/
 fgo [~]Amxqn0

G|gm c l²thk[~]cm c n³4^gvng| n[~] F t0 Wngkp/Tgxle|n|
 Cpcn Ft0 l²ngk D^a n³pv K^o tg. cnknpgm h n³r U|cn³pk[~]
 ng[~]a u^av²u c v³4³m kf ul^ao [~]uk cf[~]cvqncv n³4^u 3^pj g/
 vgo 0 Fci qdgtv xqp O kmw[~]ej *Dgtrk⁺. Gu[~]cf Dgl.
 Rtqf0 I0 I kdd *Qzhqtf+. Ft I gto cpwu I {w[~]c rtqhg^u /
 ulqt. Rtqf0 I 0 L[~]uejng *Dgtrk⁺. Ft0 Mgt^vul T»dgtv
 Ft0 J qm[~]uk Uqo qi {k L>|ugh0 Ft0 O glg{ K[~]ax^ap rtq/
 hgu^u qt0 Flcxkfcp J cpwo jgtegi p *D²eu+0 Tgucv #Z
 Cnf w[~] *Cpntc+0

Hqi cf l^a m ulkpv n³4^u 3^pgvgo gv0

VCTVCNQO LGI [\ | M<

qrf cn

Gn ul () 7
 KOT! U\ < V' T'' MQTU\ f I J CTEC C X'' T'' U U\ WN
 Vf P GNNGP ();
 KO C n4p{gl gvO U| cnpknk()B3
 KOGi { r' | cf» o gi ul Ågvkm ()B8
 C X3434i U| wn' p h x' tquc()48
 C xgl' 2tncd»nô c d34v3pdg ô ()5;
 XOC | uctpqm ()73
 XIOU' a o | gv2udgp ()85
 XKOC hqtcf cmo ()95
 XKXOCngphqtcf cmo () 6
 KZOCdf wn J co kf dwn' uc () 4
 KOT! U\ <GP XGT! UC P! OGVU\ '' XGVU I ()329
 ZOf mco c| a nco dep ()B2;
 ZIOV | c Dcm' pqp()B43
 ZKOC xk' i j' a dqtA()B52
 ZOC p2o gvul 3kgv2' i 2u gtf o 2p{gk()B73
 ZKXOMgo' a ncl' 2rtg v4()B87
 ZXOC xk' i j' a dqtA dgh|gl f knf()B95
 ZXIOGpxgt j c' r()B: 3
 KZOT! U\ < GI [M' \ Vf TUCUf I OGI U\ ©NGVKM ()B: ;
 ZXKO— xk' i xcp ul Ågv dgp ()B: 3
 ZXKXOC ul wn' p o gpgm' r' ug ()425
 KZOC ncrk: ()433
 ZZOMgo' a nj' a | cur' i c ()43;
 ZZIOC n4 v' tuc' i 2u grp34ng ()449
 ZZKOGi {gf Ån()458
 ZZKOC| gmp| 2m r wul wn' uc ()463
 ZXODgmu Ail' a 2r 4' 2u ()472
 ZXOC v434mj' 2vn4 pcr' a vcr:wn' uc ()47:
 ZXKXOMgo' a n m' r qrkkn' lc ()489
 ZXKXOMgo' a n2u n4p {gl gvg ()4: 8
 ZXKZOC v434m cv' lcô ()4: 6
 M4| 34gvp {kx' a p' 4' u ()524