

O CI [CTQM
MCP CF *f* DCP

*GI [O QUV M U\ ©N QTU\ f I T~ N+

ˆTVC<
RCK Uˆˆ Fˆˆ P



DWF CRGUV
C\ CVJ GPCGW0 KQF0i UP[QOFCKT0V0
MKCF *f* UC

3547; 06 Dwf cr guv. c| C y gpcgwo t0\0n4p{xp{qo f°lc0
*Rtlpvgf lp J wpi ct{0-

HGNGU' I GO PGM



Oci {ct/Mcpcf#000 G| ku xcp# Pgo ku qn{cp
 t²i »c0 Jcto kpe/pgi {xgp ²xg0 o kpf gppgm gmgp²tg
 oc o^at u^ao qwgx v²p{g| lg c n^Àn³/4ftg u|cnrfv
 oci {ctu^ai pcn0

J^ap{cp xcpcmA G|v ugpnk ugo 0 wflc o gi^anc/
 r[¶]cpk0 C o ci {ct^anc o gi d[¶]qwcpcm j kxcwncu
 uvcu| vkn^alc u|gtkpv c j^adqtÀ gn w 37ô 42022/gp
 rgj gwgm c u^ao wm c|qpdc c j^adqtÀ crw p³kg/
 ngf gw. o gtv uqncp^avo gpvgm c| Gi {gu^Àn/f nc/
 o qnd»n0 M^udd Àcdd dgeu²u v³/4v²pk0 C| gi {km
 u|gtkpv 52ô 62022. c o^aukm u|gtkpv : 2ô 322022 c u^a/
 o wn0 C| ki c|u^ai c n³/4²r gp rgj gv. 92/: 2022 o k/
 f gpgugtgc xcw0 c o ci {ct nk^apf qtn^au o qucp^adcp
 Ài {u| »k^ap nk^at »cp Mcpcf c hgr² k^ap{wn vj^av
 u^ao wm^ancpf »cp go gmgf kn0 R^at ²x »c p{¶v
 o gi Mcpcf c ncrwlc c o ci {ct nk^apf qtn»m gn w0
 C| »c. o kpf gp ²xdgp o clf pgo ³/4xgp u^a| cr^amnc
 u³/4³/4w hgn c nk^apf qtn»m r²rgnu^ao c0 Vxcn{ ³/4/
 g|gt go dgt jci {qw kw dgpp^Àngv ²u o gpv nk c|
 † u|cmj »p^adc ô

Oci {ct/Mcpcf^at »npgo wfl ugpnk ugo o k0

Oci {ct/Co gtni v Ai {u} »rk^a p o kpf gpnk kuo gtk
 jku|gp n³p{xgm v³o gi g lngpv o gi c| co gtnek
 o ci {ctqnt»n²u jc xcrcnk gi {/n³v jgvv v³n³v
 n³qi c»dcp c v³pi gtgpv³pp. n³agru²i²pgm vct/
 vqc Co gtni t»n xci { ngi ci^a dd co gtnek ko rtgu|/
 u|k»k»n dgu|^a o qm⁰ Oci {ct/Mcpcf^at»n gl/ c| gn
 dgu|^a o qm⁰ Vci^a p v³n³ a u ku dgu|^a o qm⁰ pcm pgxgl p⁰
 Pgo v³v²pv gi {²d. o kpv c|. jqi { gi { o ci {ct
 A³i³ i³» xgw³ c u^a vql^a l^a v² u gkpf wv o gi n³qi/
 i cypk o ci {ct/mcpcf ckn⁰

Mcpcf c pci { qtu|^a i. pci {qdd o kpv Gw»rc⁰
 Pgo n³pp{ gl v c pci { v³g³gv dgwcl p⁰ J quu| A
 kfgi o kpf gp² lgn c xcu³ k n³eu³ dcp c n³ vco² u
 perrcn t»wco c o ci {ct v³grgngv⁰ Dgeu³gvu A/
 u^a i³» n³mkuo gtgvu² i i gn o kpf gpj qx^a gn³ qi cv
 vco. cj qx^a ngj gv⁰ D²ng^a t. M³crqu^a t. Qvj qp.
 Y cney. Gu³gtj^a /|. D³rcp³gw. U³cun³ vqp. Ngj/
 dtkf i g. U³qenj qm. Tc{o qpf² u c v³ ddk o ci {ct
 v³grgngv o kpf v³quc c n³ dckp⁰ C n³ k^a pf wn
 u|^a pv kf pci {qp t³ k³ xqm⁰ M³fx³ pntg v³pw^a /
 p{q|pk dk qp{ pgo pci {qp ngj gv⁰ Ct²tc² xgm
 n³ngp² pgn⁰ G| c dgu|^a o qm⁰ pgo ku cttqi^a n o ci^a /
 pcm n³ p³ u h³pvqu^a i q⁰ k³ n³ dd h³ p{ n³ r. h³ p{/
 n³ r h³ k² v³ gm r k³ pcw³ r gm c| qwcpk o ci {ctu^a i
²gv² t n⁰ —v³ o v³ n³. co gn{gv dk v³ c³ p n³ k³ v
 o clf o^a uqm t² u|² t k o^a utclv. nt³ k³ k³ h³ f qi q/

|^au0 Gi {gn tg vnf p gpp{k ku grfi0 Ctt>n c pci {
dktqfcmo t>n c| qw ²n o ci {ctqm uqtu^at>n pgo
wf wpm ugo o kv. vnf p g| gm c| qfcxgvgw tel| qm
o ²i ku hqi pcm xcrc k nku hqi cm cv cfpk ctt>n c
m³p³u. hteuc xkf i t>r0

O²i xcrc k# G| c o wpne pgo vpf gpek^axcn
¶>fqw0 P go ci kv^aek> c nk^apf qtr^au gmgp ²u pgo
kecv o gmgw0 Euw^ap tkrqt v0 O qpf lwm vnf p ¶ {<
gi { wc|^aut>n u|>n> dgu^ao qn> O ci {ct/Mcpf^a/
dcp0 C u| qekq>i wuqnpem pgo | gvi c| f^au| qnpcm hgn/
cfvc c nk^apf qtr^au r^avqi quw^ai^at>n c ppcm j c/
v^auck>n ²u k^ap{^at>n j cv^atq| pk0 | p pgo o qpf qm
ntkkn^av0 Gttg c| c| kf . co kv qw v³n³vg0 . ki c^ap
v^an^ai qucp t³kf rppg0

P gj qi { c| qo dcp d^ato kn gp k^ap{dcp ku h^aitg/
²t^vu rgi {gp. kv. c| gr^ai^at>dcp o ²i ku rgu³4 g| go 0
C nk^apf qtr^apcm c uqtuc ugj qn ukpeu t>|u^am^aen nk/
tcnxc. knvgg tgpful gtpv eucm c v^aung o ctcf o gi
dgn rg u^ao^atc0 Mpcfc r^aipg pgo c| c| qtu^ai.
cj qn n³pp{gp rgi gvg dqrqi wpl0 U v gmgpnl rgi 0
Cnkm gr^atvgm xcrc kv c| qm k^av| cvqu ²u go dgthg/
ngwk jcteqv x^avc^am o gi c vgo ²u gwgr0 O kpf gi {km
²rgv m³p/m³p nku j un³vg²p{. co gr{ o gi²t/
fgo grp². j qi { c| knqr^adcp v^ap^am o kv c
o wpne crqv>| k^av0 C| qnt>n cnkm gr^alwmcm ugpnk
ugo dgu²n o gtvgv pvgm grxgu| vgn0

C/ Àl jk x^apfqtⁿ jgr/gvg u/kp^vp vgrg xcp pg/
 j²/u²i gmg⁰ O^au gi {^ancif dcp pgo dqrf qi wj cv.
 eucm h³f o xgu0 Kctk o wpmⁿuv pgo wf gnctvcpk
 c o quv ²rgtgngn kct0 K⁰vgnki gpu go dgt. cnk u| gn/
 ngo k o wpmⁿd»n cnet o gi²rp^k pg ku i qpf qdq⁰ c
 nk^apfqtⁿut⁰ Gi {u| gt gp nkⁿv⁰uc⁰cp c jgn/
 |gvg⁰ fvp{gti gpk ku pci {qp pgj²|0 C| gt u o wp/
 nⁿv o²i c h³k nek o wpmⁿu ku pgj g| gp d⁰lc. mv⁰k/
 pgt go dgt. D/rk^vu vku| wkugn ³u|gtqi {pc c u⁰À
 n{qu vgtj gkm c⁰w. o^auqmen fqi q| v⁰pk r g⁰ki gi {/
^ancif dcp pgo rgj gv. o gtvf^ai c c o wpmⁿgt 0

Gi { wcl^auv ¶tqm rg Oci {ct/Mcpcf^adcp0 P go
 wfqm dgu²rp^k c|qnt»n c| kf g/qfc m⁰dqtn» o ci {c/
 tqnt»n cnk⁰pgm pl⁰peu o wpmⁿlwm²u ¶i { pgo vgrg/
 r g⁰v⁰m rg0 Mcpcf c c| kf u|cnk o wpmⁿc j c|^alc. c|
²x nk⁰gdd t²u|²dgp xcp gt u o wpmⁿc. c| w⁰p o gi/
 jcn c| ²rgv²u pl⁰peu o kv eul^arp⁰ Gi gm c eucxcti »
 o ci {ctqm o²i grj gn{g| f²utg x^atpcn0 Dgu²rp^k hq/
 iqm c/qnt»n cnkn o^at rgvgrg r g⁰v⁰m cnkn o^at xcⁿ/
 dcp n⁰pcfck o ci {ctqm0 Dgu²rgm c o ci {ct vgrg/
 rgmt n cjqn jcv⁰cu vgt⁰rgv⁰p pgo jcm c| go dgt
 o^auv. eucm o ci {ct u|»v0 Dgu²rgm c d^avt o ci {c/
 tqnt»n cnk⁰ndgp cpp{k c| gt . jqi { o²i c| | u|cm/
 j c|^adcp ku nk wf⁰v⁰m euk⁰ctpk o ci wpmⁿcm c o gi/
²ij gv²uv. c dqrf qi wf⁰u0

Oci {ct/Mcpcfck j^atqo t²u|tg rgj gvpg qu|/

vpk0 C| gnu euqrqtvd c pci {x^atquqm o ci {ctlck
 vctvq|pcn0 Vwrlf qpkⁿr rrgp n^rv v^rknwu jgn{t n dg/
 u|²ij gv[~]pn0 Y kppk gi t n ²u O qpwgert»n0 O qpwgen
 c nerw cj qx^a ²tng|pgm c| go dgtgm ²u cj qppcp
 xkuu|ckpf wpcn0 Y kppk gi P {wi cv/Mcpcf c h x^a/
 tquc. c ngi v^rknwucdd mcpcfck pci {x^atqu0 Kppgp
 o gppgm u|²v c u|²rt»|uc o kpf gp k^ap{^adc c. o c/
 i {ctqm G|gnpgm c| ²ngv c|qpdc o ²i pgo m[~]4
 p³40 C x^atqk go dgt ²ngv. d^atj qn ngi {gp c| c xk/
 rⁱ qp. pci {l^adcp gi {g|kn0 O gi ngm c|qpdc gtt n
 ku go rⁱng|pk o gtv gp²m[~]pn pgo xqpc c n^rr v^rigu0
 C| ki c|k ²tfnguu²i < P {wi cv/Mcpcf c0 Co knqt
 Mcpcf^at»n ^ancrⁱpqu^ai dcp dgu|²n[~]pm wrlf qp/
 n^rr rrgp o kpf ki gtt n xcp u|»0 J^atqo j cvm cu qt/
 u|^ai t»n0 *Ocpkqd^at»n Ucunvuj gy cpt»n* ²u *Cnc*
dgtwt»n0 G| c j^atqo gi {w c rtcgk vctvo^ap|.
 co gn| o c c| gi²u| xkⁱ ngi pci {qdd i ckdqpcvto
 gi {u²i g0 C|²tv o gppgm kfg c o ci {ctqm o gtv
 pci {l^adcp j cuqpfⁱv c o k Pci {/Oci {ct/Crⁱ4/
 f[~]pn^tg. eum gi { nleukv ô pci {qdd0 C| kic/k o c/
 i {ct vgrgugm *Ucunvuj gy cpdc xcpnc0* Crdgtv
 o^at knⁱdd ^ancwgp{²u|v ^amco. kw xcpm c jc/
 vco cu tpej qm cj qn hcmu|^ao tc vcp{^a|pcm c
 n^rxcm u c o ctj^an0 Kfg eum [~]cdcp vgrg^fpgm
 o ci {ctqm fg c|²tv o^at u|²r u|^ao o cn xcpnc0
 Ocpkqdc o ²i pgo lgrgpv u o ci {ct u| go r qpv»n0

Eucm Y kppkr gi n³/₄p{²n³p xcppcm o ci {ct vgr/
 r gm À {j qi { g | gn c | qtu^a i i cn x²i | gm ku o ci {ct
 u | go r qpvd»n cddcp c ekmalgp. co gn{ O cpkqdc
 nqto^a p{| »l^axen xen» dgu²ni gv²ut n u^ao qn dg0
 Cnk c | ki c | k nēpcfck o ci {ct²rgv²v cnetlc o gi/
 kuo gtpk c p{wi cvnēpcfck²rgv²n u | »n» t²u | v qn/
 xcuuc gnhi {grgo o gr0

C jcto cf km t²u | < Mgrgv/Mcpcfco Vcra p À {
 o qpfj cv^ao . j qi { r »vGi {gu²ñ/fnc o qn0 Mku/
 —pk» rtko k³gdd nēcf^audcp0 Hgln f krctqtu^ai .
 c | qnpcm o gpgf²ng. cnkm pgo wf vcm dglwpk c |
^amco qndc²u u | ãm²i d n kw tgnvf vgn0 Co k Co gk/
 n³dcp itcpf³|wu. c | kw o²i eucm uglv²vk c l³/₄
 xgpf pci {u^ai qv. fg vto²u | gvugp c o k xku | q/
 p{ckpnj q | n³rguvo²i ku ko r qp^an»0

G | v rt»d^anqo p{Àvcpk vcra p ukngt²ñ0 L»n w/
 f qo . j qi { pgi² | hgrefcvc x^amcmq | wo . fg cnk
 o ci c ³/₄ o ci^apcm wcv. cpcm gl gt cnēf^am | cn ku
 u^ao qpk ngn0 J c o²i ku. eucm j cr^ap{ n³rgv ukng/
 t²ñ cfpk c nēpcfck o ci {ctqm²rgv²t n À { dqrf qi/
 pemhqi qo o ci co cv²tgl pl0

J qx^a u| »t»f wmu|² vc o ci {ctqmA

J c c|v nwevwm jqi { jqn xepcem c o ci {c/
 tqm Ai {u| »x^ap Mcpcf^apcm xcrc o gpp{k x^atqu^av
 hgn ngnpgg go n|gpk O²i ku ¾u| gktwpm gi {
 euqo » jgn|gv cjqn cmqt. co knqt mÄpp l^atwpm
 vcr^anwpm o ci {ctqnev

Ucunewj gy cpkvtqo^ap {dcp

Cuswkj *nd0 6ô 7 eucrf+ Cppcj gko *nd0 6ô 7
 eucrf+. Cmc *nd0 5ô 6 eucrf+. Dlhgx^at²u Dcp/
 fgt *nd0 522/572 eucrf+. Dtgo gp *nd0 37ô 38 euc/
 rff+. Dtwpq *nd0 42 eucrf+. Erndcpm *nd0 8ô 9 euc/
 rff+. Ecpc *nd0 97ô :2 eucrf+. Eqpuwn *kpn^add gp/
 pgm n³4p{²n³p fqn|q|pcm nd0 32ô 37 eucrf+.
 vEwrc *nd0 57ô 62 eucrf+. Ewf yqtj *6ô 7 euc/
 rff+. Fgnkung *nd0 5ô 6 eucrf+. Gitqug *nd0 8ô 9
 eucrf+ Gvngxkcp *p²j^ap{ xcuÄk o wpr^au+. Gvgt/
 j^a|{ *nd0 62 eucrf+. Lxewc *nd0 6ô 7 eucrf²u
 47ô 52 o ci^apqu o wpr^au+ Mgppgf { *nd0 37ô 42
 eucrf+. Mkr npi *nd0 52 eucrf+. Ngcum *nd0 57ô 62
 eucrf+. Nguqem *nd0 82ô 322 eucrf+. Ngtpq *nd0
 8ô 9 eucrf+. Octnkpu *nd0 :ô 32 eucrf+. Okffrg
 Ncng *nd0 37ô 42 eucrf+. Octnkpej *nd0 Uô 32 euc/
 rff+. Ogrkng *nd0 37 eucrf c n³4p{²ngp+. Qwj qp
 *nd0 52ô 62 eucrf+. Rvpplej {²u Rwpngw *nd0 322
 eucrf+. Rtwf j qo o g *nd0 57ô 62 eucrf+. T²i kpg
 *nd0 322 eucrf. ki gp uqm c o ci^apqu o wpr^au. u^a/
 o wm^ancpf »cp x^anq| km+. Uô Dtkgwz *nd0 37 euc
 rff+. Uqenj qm *nd0 322ô 372 eucrf+. Uqwj /

Vqvej y qqf *nd0 : eucrf f+. Ucuwvqqp *nd0 4//52*3
 o ci {ct+. Uczqj km *nd0 47 eucrf f+. Xkueqwpv *nd.
 32ô 37 eucrf f+. Y kpf j wtuh *nd0 42ô 47 eucrf f+.
 Y checy *nd0 522 eucrf f+. Y j kgy qqf *nd0 72ô 82
 eucrf f+. Y cir qrg *nd0 : ô 32 eucrf f+. Y kj gdtqqm
 *nd0 8ô 9 eucrf f+. Y g{dwt p *nd0 3ô 4 eucrf f+.
 Y q)j qwug *nd0 4 eucrf f+. [qtmqp *nd0 7ô 8 eucrf f+0
 P qtdwt{ *42ô 47 eucrf f+. J cm qm I rcf gpplp *32ô
 34 eucrf f+. Mgrkej gt *37 eucrf f+. Mcr qux^at *332ô
 342 eucrf f0

C| qpnf^h ãn o²i² rpgm g| gngp c j gn| gngp<
 Ckrf wpc. Crc. Dkrko o v. I cto gn Eqri cvg.
 Fqjguhqtf. Fcpc Gcuwv pf. Hqty ctf. Hgppy qqf.
 I wtpuc{. I wfy kp. I tcuqp. J cy gtf gp. J qtk qp v.
 Kpf kcp J gcf. Mkrng{. Mj gf kxg. Ncpi dcpm O ctt{/
 hkrf. O gcv cktm O gthqtf. O qqug [cy. O qqug
 Xqng{. O wpuvt. O gkf qth Qf guuc. Rtlekxkng.
 Rtkpeg Cndgtv. Rrklpxkgy. Rkwo cp. Mqengf crg.
 Tqenj chgp. Twj kfc. Uô Dquxgng. Ukf rg{. Uô
 Dpgpf km. Uô J wdgtv. Uô Y cndqwi. Ucpewct{.
 Uj cpf. Uy kw S wxgpv. Uwj gtrcpf. Vtco r kpi
 Neng. Vwdgtqug. Y cpi qwtf. Y cdcpm Y kgy hkrf.
 Y cif tqp. [qwpi. \ gwt. \ grv. Ictdqp J cugrenkh
 Vcpvno 0

Cndgtv

Dtwf gtj glo. Eci ct{. Ej co r kqp. Eqrgo cp.
 Fkco qpf Ek{. Gfo qpvp *37ô 42 eucrf f+. o ci^a pqu
 o wpi^a u ki gp uqm. I tcwpp. J ctf kxkng. J wuuct.
 Ngj dtkf ig *nd0 : 2ô 322 eucrf f+. Neng Uô Xlpegpv
 *m^a p³ ugp R^a tk u n³ p² n¹ l³ wgm kfg c o^a t
 t² i gddgp nk^a pf qtqiv o ci {ctqm. O gf kelpg J cv.
 O qtlpxkng. O cppxkng. O kng Tkxgt. Tc{o qpf.
 Vcdgt *nd0 : ô 32 eucrf f. uqm c o ci^a pqu o wpi^a u+.
 Xgto krikp. Dquqm Y tgpj cp0

O c p k q d c

Y k p p k r g i * n d 0 3 2 2 6 4 2 2 e u c r f f . w k p 5 2 2 2 6 5 7 2 2
 o w p n i u + . D w r g t * n q t o a p { | } » v g n r g + . F c e q v c .
 F w i w f G m j q V k k H q t v C r g z c p f t g * h e d 0 3 2 2 6 3 7 2
 o w p n i u + . I t g c v H c k u . H k p f r c { . O c t s w g # . P g m k p f .
 R k p g h c m u . U r t c p i w g * w l k p i { g p h 3 / 4 f g m c n 3 / 4 p { 2 /
 n g p n g i c i f d d 8 2 6 : 2 n 1 / 2 t r g v g | + V { f c m Y t f g p .
 Y q q f t k f i g * c n g i t 2 i k d d k w g p k v g n r . 3 7 6 4 2 t 2 i k
 e u c r f f + 0

Q p v c t k q

C y l e q t w p . H q t v H c p e g u . H q t f . H q t v Y k r k c o .
 H c p f g t u . J c o k w q p . O e F q w i g m O k m u . Q u j c x c .
 U t q e w q p . P k c i c t c / H c m u . Y g k r p f . R q t v E q n d q t p g .
 D t c p v h q t f . E c r g f q p k c . I w g n j . I c m M k e j g p g t .
 D t k f i g d w i . V j q t q p f . U 0 V q o c u . Y k p f u q t 2 u U c t p k c 0

D t k k u j E q n w o d k

U w q y u k j q g . N o o d g t v c p . O e D t k f i g . R t k p e g
 I g q t i g . R q y g n T k y g t . U y k h v E t k e m U k p g n / c k u O k m u .
 X c p e q w x g t 0

P q x c U e q v c

P g y C d g t f c p . U k p g { * o c i { c t n 3 / 4 r q p v 0 4 7 6 5 2
 o c i { c t e u c r f f + 0

S w g d g e

O q p v t g c n n 3 / 4 p { 2 n 3 p * n d 0 3 2 2 2 o c i { c t . v 2 r g p
 7 2 2 6 8 2 2 . f g a n c p f » c p n d 0 5 2 e u c r f f 2 n k w t : x c r c /
 o k p v V t q p u k f g p 2 u g n u » t v c p v 3 / 4 d h e r 0

O ci {ct uqtuqmc v̄gpi gtgp

*C/ i Cp»pkcë hgf²ñ gv²p. *ô -θ*

G| c| k| c| k nk^apfqtñ>jcl»0 ¾u| gup 3237/gp xci {wpm tclvc. fg gdd n eucm 334 mēdkp/wcu. c v̄¼ddk ;25 jcto cf km qu| v̄ñ{qp wc| kn0 C l̄p{gugp dgtgpf g| gw v̄gto gndgp crki iř|gpi xcrcnk c hg/ f²m¼ 2u c nk^apfqtñ>m u|^ao^atc hgpvctqvw jg/ n|gm r g f ki | u^Àñqñ uki v̄¼ xg0 C nk^apfqtñ>m n¼ |¾w o k xku| Ñm gn c| gnu u²i gv0 P go ngxgugdd. o kp v u|^a/pgi {xgp o ci {ct x^ai pgnk c| ku o gtgv̄gp pci {xkñ i pcn0 Xcp kw cpi qn»n n̄g|fxg c n̄g| wqn» Dcmñ p p^aek̄ki o kpf gp lclvc0

C o k xkñ i wpm c|qpdep eucm kw crpv xcp0 J c o^at hgrō gt²u| n̄g| Ñm dk̄ qp{ eucm c| cpi qn u| » l^atlc 2u c| gnu qu| v̄ñ{ Ñ wcuqm n¼ ¾w tclvc n̄x Ñ eucm gi { o ci {ctv n̄g| gv v̄ñ{ rpl0 Xqf keum Kō tg cr^ar iř^da pqu. jcv̄cp gu| v̄gpf v̄gtj²xgn c x^an̄p kpf wv gn c| Ñj c|^adc. Mcpcf^adc. o gtv Ecn̄ ct{ 2tugm j^ñxv o gi. jqi { Cndgtv v̄ctv/ o^ap{dcp nk̄gpe p{grk̄gp rt²fkn̄rlc c| —t ki²k0 K{ gp go dgtgmku eucmp^a n̄p mēnf pcn0

C šncpcfck nk^apfqtñ>m c| k| c| k nk^apfqtñ>n0 G| gm c| k| c| k nk^apfqtñ>m pgo c|qm cn̄ktg Co gtn̄ dcp o^at o n̄g| l̄p| gm x^at. co gn{gv c j q|^av̄ctv| »m u|gtgv̄g d²n̄rv r wj^atc0 G| gm 2r/ r gp Ñ { c dk̄ qp{ v̄rcpñⁱ dc tqj cpcm o kp v cpcn̄k gl²p c| co gtn̄ek o ci {ctuⁱ Ñw¼ k0 Mc/ pcf^at»no 2i crki wf pcmxcrō k0

Hqn\vp n³/₄v[~]Am l^atqm c nⁱ v³/ddl²v o^at ku g/
tgo 0 O clf pgo xcrc o gpp{ kcp. gi {u| gt h³/₄f o [~]xgu
go dgt. cnkv c h³/₄f xku/ nk c o^aukm xkⁱ dc0
O kpf gi { kmn²tf²u[~]Am eucmgn³/₄Am hqtqi 0

Cnef pcm n³/₄v[~]Am krctquqm o wpmⁱuqm ku
cnkm c| qwepk i {^atendcp. o jgn{gnldgp rt>d^an/
pcm o clf gjj gn{g| ngf pk0 Eucm o kpv h³/₄f o wpmⁱ/
uqm ner vcm dgdqeu^a v³uv. o gtv c| krctk o wpmⁱuqm
gn wMcpfc ner wkvku dgeuwm³ n0

Gi {/n²v kpvgnki gpugdd wcu ku cnef 0 C|. gi {km
D/rku³u^a nco k vku| vkugn. o gi vpwv o^at xcrc/
o kv cpi qmⁿ u| [~]xgugp ugi [~]v c v³/ddk. fg g| ³/₄/
o ci^axen o gi jcuqprqw go dgt0 C| v²t|k jqi { c|
gi²u| xkⁱ i gmgpu²i g²u o kpf gpnkldgp tqau| cne/
tcqvul ko cvqr0

C| gmgphqtctfcm k o q| i cm cndcp nkxgw c
t²u²v uqm [~]i²tgvgv ner qw. fg o²i v³/ddgv eucn³/
fqw0 O quv o^at ugo o k n ugo cnet wfpk co k
o ³/₄v³wg xcp. eucm gi { e²n ngdgi gn wg< fqni q| pk
²u hrglvgp0

C| gi {²pk vci²f^km j ugk gm ctfj cvcvc/
pqn0 Vcⁱp c nⁱu| ko rvc[~]kwucdd n³/₄v[~]Am gi { hqi/
v³ej pkmw. cnk jquu| cucp o ci {ct^a||c. jqi { cmqt
²r gp nevpc xqrv. co knqt xkⁱ ui^a| pk nmgw xqrc0
O quv g| v c hqi^au| n²tf²uv u| cd^an{q| v³m pgo fqv/
i q| jcvpc v³/dd² qwj qp. j qrvw gi { nku xkⁱ nk^a/
tqucpc o kpf gpnk u| gtgv²v nk[~]xvc²u o wpmⁱl^av
ki c^ap o gi dgeu[~]Am² n0 Gi { dct^avc j [~]xvc c| [~]v/
xkⁱ i dc0 Qwj qp jci {vc hrgu²i²v j^atqo i {gto g/
n²v²u gkpf wv u| gtgpeu²v rt>d^arp0 O kpf gpv c
eucⁱf²t0

Xcp uqm co gtn²ek o ci {ct ku n³/₄v[~]Am0 Cp/
penk gl²p xku| cx^a pf qtqncm o quv[~]l²c ngl f kn0

M²v r^atk uk o ci {ct ku xgn[~]Am wc| kn0 Gffki
pci {qp u| ²r gp ngtgugm fg o quv o^at pgo p{[~]lv

o gi²ij gv²uv c xkfi H x^atquc0 O gppgm vx^add c
u|gtgpeug v^ap0

C rgi fgt ugdd crcm c| ³/₄gi Uqo qi {k d^aeuk0
v o^at o^au l^ad»n lctci v^an0 Pgnk pgo 0 ngnpgg
Àxc ngrpk xcp qwj qp v^agpj cv j qif r qo r^au
h^af lg O ci {ctqtu^ai qp. d^au^a n^ap j kfgk j qi {
Co gtn^adcp u|gtg|vg0 O^at xqrv qf c^av n^au|gt0
ì O²i p²i { j qif ngnpgg c dktv^anj q|. j qi { ngtgm/
u^ao rgi {gp#ê ô j kfgk o quqn{qi xc²u g|v kw/
j qp pgo wfv c gr^atpk0 ì Mx^ai qm gi { nku fq^antv
c| co gtn^alcnd»rê. ô nœci j q|^a. ì o²i ku eucm c
fq^ant c rgi lqdd r²p| c xkfi qp#ê

Uqo qi {k d^aeuk c xgl²t0 Mkv p gp dgu²n cpi q/
nm vguv. lqx^aku crcm^av o kpf gphr^a r^avpk cj qn
xcrc k dcl xcp. xci { j c xcrcnk xli cu|vcpk d^a/
vt^acpk ngn0 Gro qpf lc gi²u|²rgw^av²pgv²v o k
o kpf gp xqrv n^app cddcp c o^au xkfi dcp²u r²n/
f^al^ap hndw|f wpcmc eu^ai gf n0

C u^a|pgi {xgp o ci {ct ³/₄u|gctv rgi cr^add
gi {gn tg0 Cddcp ugpnk ugo n^av^agm^a km j qi { c
vpi gtk wc|^auv pgo c| u^ao wntc v^an^am hgn0
Cpp^an ku k^an^add uqm xqrv c dcl. o gtv Ej gtdqwti /
d»n nkpf wxc. c eucvtp^adcp tgv^apgv^au xkj ct
nerqw gn dgpp^angv²u dk qp{ pgo uqnev j cu| /
p^anc| qwj ppt»nj q| qwpci {u|gt r^anc0

M^av r²up{ktg pgo rgi gvw r^avpk n^au²tv^ag/
ugp d^ai qw c jcl» m^avlg. j qi { c pci { n^af dgp
j^av^acf lqp o ci^at»nc u|go n^av³/₄ i |³/₄u³ngn0

C| gi {km uctqndcp gi { h^aven rgi²p{tg cnef /
co 0 ©ppgrn dng^av gi { rgtetg ug xgv^ag xqrc
ng0 Hgl²v vgp{gt²dg vgo gwg²u hqn{vqp eucm c
euk^olc qtt^av xk^aui^anc0 F^af qrv ku xcrc k p»^av.
eucmgpp{kv²tv^aggo dgn rg<

ì Dgvi c|²p rmg0 00ê

Rgf ki ô pgo kurng^axqrvd^agvi 00

C xkj ctv pgo uqnev d^av^am eucm c i {gtgnm

u|cncfi^ancm hgn²u cfi^apci { p_gxgv²uagn c hgf²n/
|gv_gp0 C o ci {ct nk^apfqtn^m n³/₄³/₄v p cki
cnefv o kpf³/₄u|g p²i {gp wv|pcm nk c o^at t²
i²ddgp nkngt^Àvj q|^avctvq| »knj q| 0

O kpf gp tqul pcm x²i g u|cnef gi {u|gt²u xcn[»]/
dep jcto cfper^{te} hgtci {qi qw c v_gpi gt0 C o c/
i {ctlc_kpm qf^am_wem c jcl» n_qtn^av^aj q|. u|go dg
c per^rcr⁰ Qn{cp xqrv c n^rr. o k_vj c qf^av. c|
^am ckm dktqfcm^adep c o gpp{dqm_qp o gi jcu^{cf}v
xqpc xcr^ok pci { r²p|gu|ceum[»] ²u cdd[»]n uqm^a
uqmo knk[»]p{kfqm^at j w_wpc c n^adwmgr⁰

C| go dgtgm gffki dqt^Àu ctec gi {u|gttg o q/
uqn{i »u^a x^anq|qw ²u o gi n_g|f f³/₄v c| »eg^ap/
l^at[»]j cl[»]mfgt u. o w_wv^ai qu²n_g0

Gddgp ku c nk^apfqtn^m l^atvcm gn l[»] r²n^a/
xcr⁰ Vgto²u|gv_ggp c| cpi q_qm o gtv pgo eucm c
o k_gpm jcpgo o kpf gp o^au pgo|g_k²i gm l^rr^p/
n_gm vctw[»]n_qf[»]cn⁰ N[»]xgtugp{l^av[»]m_{en} h_qi cf^auq_n^a
n_{en}n_g|f^vmc| cpi q_qn⁰

C o ci {ct n_gi²p{gm eu³/pf g_ugm o ctfv^{cn}0 Uq/
n^aki h_i {gn_go. u_gpnk ugo xgw t²u|v c l^av[»]n_{dc}p0
Gi { eu³/pf gu o ci {ct uq_n^aki p²|vg. c|v³p n³/₄³/₄v
gi {gv²u c v_gpi gt h_gr² h_qtf w_m0

ô M³/pp{ p_gnk_m ô o qpfqwc p_gn_go ô m
q_vj qp xcp_{pc}n[#]

Gi { nku o ci {ct i { |gn_go t n ku dg n_gm u|^a/
o q_qp₀ C hgf²n_gv gi { t²u|²v g_mgt[»]g_w²m ²u d_qm|/
r^an^av t³/₄v³/p³/₄v_n0 C p²i {u|³/₄ n³/₄gr²tg dg/
f_qd^vm c n_gu|v[»]n_gv u h_gn_u»n_qw_{em} o kpf g_{pn}k
gi { nku det^aw^ai qu o²tm|²utg0 Gi { u|²r u|^an
o ci {ct p_gnk ku f_w^anc o ci^av. h_gn_j ^Àv c u|q_ne^v
ncp n_gu|v[»]v²u x^atv c| g_mph_gv. L[»]k²ki u_gpnk
ugo ^am_w n³/₄²p_gm x²i tg h_qi v_m gi { cpi q_w. cnk
ur q_tv|gt gp |kc d_qm|q_n^au0

O gi n_g|f f³/₄v c o²tm|²u0 C o ci {ct x^atv. c|
cpi q_n qf^av_w gi { n_keuk. o gi r_k|n^anc c o c/

i {ct qtt^a v0 C o ci {ct ku hngni gvgw. fg pgo v^{3/4}/
v²pv ugo o k nqo qn{ f qmji 0 ~i { o gpv gl xci { ^{3/4}
rgteki 0

Gi {u| gttg eucm c| cpi qn c jcu^atc ãv^{3/4}w c
ngi²p{pgm cnk r g f ki qwj qp ug klgf o gi gi { nku
xgtgngf²uv n co kv c hgl²p ngtgu| v^{3/4}ñj ã »f» ner c/
x^ai^au dk qp{¶kw0 Gttg hngj ^{3/4}f ãv²u pci {qv
wi tqw0

ô J wlp{g. c| cr^af# ô j cmqwc m xcrc k m^{3/4}ñ
p^{3/4}ugv c| cpi qm²u c| v²p c o ci {ct pgnk c| cp/
i qmrcn0 ©v^{3/4}vg. r ãv^{3/4}ng. c n²v ^{3/4}ng f qni q| qw. o kv
xcrc k ngtgr n 0 Kk| gp xgtgngf²uv gttgher² pgo
ki gp n²wcn0 C| cpi qn x²fvg o ci^av. co ¶ c o c/
i {ctv gi {u| gttg xci { ^{3/4}gp nghqi v²n0 Co kmqt o^at
^atwc m c vcp^a xqiv v²xg. o²i cmqt ku n²tqo nq/
fqw²u pgnk cnetv o gppk c o quqn{i» gngp/
hgr²pgn0

C| cpi qn ngj ã v c ngu| v l²v. qfci²rgw²u
pgxgwg o gi t^a| v c o ci {ct ngu| v u ngi²v0 Gttg
c o k go dgt ãpm ku gr²quqn{qf qw²u gi {u| gttg c
o ci {ctqm²u c| cpi qm²ngmgu vcr udep v^{3/4}vgnk0

Co ¶ u²r c| kf . uqj c gi { rkncpctc ugo
r kj gp gn c hgf²ñ gv p{ ã ui²ug0 M²tv^a| pcm nqe/
n²v xgvpgm o kpf gp u| gtgpeugl^a v²nqv o gi n²u²trg/
pgn0 J ¶kl^a m kpxk^a n^a m c o ci {ctqnev ku. fg
dk qp{ gi {knpgm ugo v²o cf ngf xg0 .. m gi {gn tg
c| ²rgv ãmgk c eucif lwm uqtu^axcn mjen²| pcm²u
k i cvqwep ngulm o gttg ku hqtfwn c eucrhc u| g/
tgpeug0

Eu^atf^au c| »eg^ap n^{3/4}gr²p

C| gi {km guvg o gi j ¶k»v ner wpn0 C j cl» ner k/
v²p{c lgrgpvgw. j qi { pci { j cpi xgtugp{ ngu|
guvg c npej/tqqo/dcp²u vgnkpvgn ctte.
j qi { c| gn cf^au l»v²nqp{e²n^a o kpf gpnk v m^{3/4}ñp ku

hgmʔtv c o gi lgrp²utg0 Oci^ap c o gi j[¶]k»p lgrg| /
 v̆m jqi { d^t dgʔrvk f[¶] plpeugp. w^ʔpc i { l^vu
 rgul c| cpi qn²u co gtnck v̆pi gt²ul k^vo²p { gm
 u^ao^atc0 C h x²f p³m²i gv Ukt Ej ctrgu Mpi uo kn
 cfo k^arku x^ancnc. o kpv c jcl»p wc|» rgi pci { qdd
 gn ngn u²i0 Cmuqt o^at gl gtp { qreu^a | o²tl⁴f /
 p { kg l^atwpm dgpp c| Cwepk»eg^ap n³4 gr²p. kn
 cmco cvgnu| ccul vepkci c^ap pgo ul cdcf0

C tgpfg²u i qpfle c hcvrntc ul cnefv. cnkn/
 pgm c| qpdcp gl cmco o cn pgo xqrv pgi²| hgr/
 cfewm o gtv n²v qrgt²pgngu ku xgn²pm xqrv Av/
 dcp Mpcfc hgr0 Fg c|²tv nk cnetvm vppk o c/
 i wn²tv²u o kpf gpv gn cnetvm vtgo vpk co kv
 eum rjgv c pci { x[¶] n³4 gr²p0 O²i jqi |^ao ku
 dg^an[¶]qvcem o kxgn jcmq^wm jqi { o ci { ct
 xci { qm²u o gi n²tf g| v̆m pgo wf p^ao / g²pgmgn
 xci { urge^krku o ci { ct gi | qvkuu v̆peecn go gpk
 c| guv h²p {²v0 Uelpqu. pgo wfco tgpfgmg² /
 u²Antg^ampk fg o k o ci { ctqm c|²tv o²i ku ul gtg/
 rgn²pm ô j c eum n³4 xgxg ku0

C hcvrnm hqn[¶]vpp qw hti qn»fcm Xqfkeum
 h vku vgrpf n²dkplc n³4²Än x²itg pgnk^wtaⁿm
 o ci wnev²u pci { cn[¶]cvqcp dg^an[¶]qvcn0 Ctte
 n²tv²m c h vku vgrpf wcv jqi { cflc n³4²eu³p ô
 c ngo²p { n²cr l^av. o gtv kn[¶]gp plpeu c| gi²ul
 jcl»p. fg w²p o²i Mpcf^adcp ugo0 Oclf c|
 gi { km nqo knu gddgp hqi o gi lgrppk²u gddgp
 hji l^am c| cfqo^ap { qnev i { lvgp⁰⁰ Vgto²ul vgwgp
 o kpf gp c n[¶]x^apu^a i wnu| gtpv²4²p⁰⁰

C npej/tqqo/qv xc»dcp u²r gp hgr[¶]u[¶] vgw²n0
 C nepfcm»p^an xqrv c f[¶]u| cul vn co gn[¶] o gmw c|
 cfo k^arku hji n²v jgn[¶]gv Jvejgt ner^kp { . c jcl»
 rctepuqnc v̆tucu^ai^adcp0 lqddt»n c| co gtnck
 dert»n c| cpi qn |^au| n» ngpi gw. c nepfcm» p {[¶]u^av
 rgfki c Ewptf jcvmo cu u^ati c qtqu| fplc
 vnetv gj Kv xqrv c r»fkwo c ul gtgr n m u^ao^atc.

kf g j q | v̂ m c | qpi qt^a v² u c m̃^ñ p h̃ r̃ g | g p g u | g t u |^a /
o q n e v̂ C n e r k̃ p { h e n u | » ñ^ñ u c j c u | p^a ñ. o g t v c
j c l » o k p f g p w e u c q w u | q t q p i q w c v g t g o d g p 0

Co k n u t d g r̃ r v̂ p m c v g t g o d g. c j c l » t g p f g u
| g p g n e t c o^a t l^a v u | q w c c p { k̃ p { v. c o g n { g v
ë J^a d q t Æ c r g x g i d g p i e p̂ t g n g t g u | v g n g n 0 R g t e g /
n k i | Æ i q w c v r u. o c l f c | g n u j k x c v̂ u q u² p g n g u
ñ^ñ k g n g | g w. ñ^ñ v u |² r f c r v² p g n g r v g n p c i { v g u |² u
o g m g w 0 C v̂ t u c î i g i { n k u x k^a o u^a i t c x^a i { q w.
c o g n { g v j c o c t q u c p o g i n e r v e n 0 O t 0 E j k k g t u
n g f x g u. x c ñ f k p̂ f c r q m e n o w e w e w e c j c l » ñ^ñ /
|³ p u² i² v̂ 0

C ñ^ñ k g n g | u |^a o t » n p g o w f w m o g i^a n e r p̂
v p k j q i { x^a l l q p p g ñ p m u | » ñ / g. o c i { c t q n p c n A
C | v̂ p { . j q i { u q n e p p² | v g m h e r̃ p m c o k n u t c
j c l » | g p g n e t^a p c m x g | g v l g u | » ñ v j g i g f Æ n 0 f ñ^ñ /
n i ì E | c t f c u e / v c f q w g n. c o u q t q p g | c u |^a o
k { g p j g n { g u |^a u c n u | g t g r g n 0 O k e u c m j c n i c w m
a j p̂ c w c n² u x^a t w m c e u^a t f^a u v. f g e u c m p g o c n e t /
v c m c | k u o g t v o g ñ f k̃ m o g i e u g p f Æ p k 0 X c r c o k
x q n v c r g x g i d g p. f g g | k u e u c m q n { c p. o k p v c
i w ñ^a u. c o g n { g v c o g p Æ ñ t v^a p j k f g w g m f g d k /
| q p { c u | p̂² v u g ñ w c c | k i c | k o c i { c t n u p { j^a /
p c n 0 C n k g | v c h | v g v g w g. c n k g | v c p » v̂ v j c n /
n q w c. c | d k q p { p g o k i g p u | g t g w g o g i c o c i { c t
² v g n. c o c i { c t o w | u k ñ v r g f k i c u q m h p q o
p̂ { g p e h e r v ñ^ñ /³ w f g l » n g u g w x q p c x c r c o k k i c | k
j c | c k c f k x c v u c o g t k n e k u n o k ñ^ñ Æ n g i { g v
u | k p̂² p q f c c f w p m x q p c g i { t q r q i » u e u^a t f^a u² t v̂ 0

C v̂^ñ d d k u |^a o c | ŵ p g i { o^a u ŵ p | c l n q w r g
o k p f g p ñ^ñ /³ u g d d² t f g n g u u² i p² m Æ n r g i h e r l g d d
o² i c | v r g j g v p g o g i g o ñ^ñ p k j q i { c o^a u k m j k x c /
v̂ u q u² p g n g u p² o g v̂ Æ n² p g n g r g g n U e j w o c p p M̂ v
i t^a p^a q u^a v̂ 0 O q u v u g w f p^a o g r f³ p v g p k j q i { x q n / g
d g p p g u |^a p f² n q u u^a i. f g c | v̂ p { . j q i { o k p f g p u |^a /
o q v o g i k u o² v g n g m f g g d d g p c | g i { g u g v d g p p g o

vr uqncm cffki. co ʃi o²i gi {u|gt o gi nngw
xqpc c|²pgngupgmlgrppkg c nʃ4³pu²i gn v(00)

C| ku hgrv pv. jqi { eucm gi { p k u^ao xqrv.
xku|qpv c| ki c|k f kfcrv c nqo kmuqm xʃk^vm nk0
C| gi {km xcndcp tgo gm^ññ v³peqrv c o^aukm rgfki
netcmgtcrnʃv³ uckxcn jcvw0 Gi {u|gt . lgrgp^vm/
vgrgp o»n³nev o qpf^vcm gn²u c vruqtn³p o²i c
u|k²pc dwi^au^av ku grp{gng. jqrw pci {qp f^ñqrv/
icvqw. ogtv²rrgp c ngi ut dd nʃ4³w x^aiv c
jcl>pn0

Gmqt o^at l^atvcm c ng^ap{qm²u u|gf^vm c|
qdwnuqnev0 Dk qp{ kpn^ñdd eucm c rgtokm jwqv/
vcm eucm ngxgugp cf^vcm uj knkpi gv²u gi {/n³v kf g/
igp ô xci {ku rqpvcddcp pgo cpi qn ô fqdqw
qfc gi { fqm^ñt0 C| cpi qrvm vj^av xkⁱ{^a|pcm c
r²p|^ñtg0 G| o^aupcr c nk^ññ i gu|v gw gtgf o²p{d n
ku nk^ñgt^ñ0 Cppcm gngp²tg. jqi { c| grp³km cfo k/
t^aru pci {qdd rcr^ñr²p|v vgw dg gnu pgm c i { lv /
v³p{²tdc. c|³u|gu gtgf o²p{ o kpf³u|g v³gn³v
hqv uvtrkpi. xci {ku nʃ4^ñgn^ñ eucm p²i {o knk
o ci {ct nqtqpc xqn0 P^an^vpm c u|gi²p{ Oci {ct/
qtu^a i jcp l>xcn^vdd i { n³u|g kn{gp cmern cmqt0

C| cpi qn jk^opwu| j cpi lek u^amcem nk c|²1/
u|cn^ñdc. co knqt u²w^at^vm c| clw^ñnev²u x²i g
xqrv c o wcv^ai pcn0 Gi {u|gttg xcrcok²rgu j kf gi
l^atv^av c r^xgi k c h²thcm u|crf^vcm²u j q|^vm
c| cuu|qp{qncm c. dwpf^anev. C| per gi²u|²llgn
qn{cp j kf gi xqrv. o kp v p^an^vpm c ngi ngi {wrgpgdd
f gego dgtgdp0

Tgi i gntg c|^vp nk^ñgt^ñv o kpf gp0 | rrgp. co k/
nqt ngi xk^ao cdd xqrv c v³tuc^ai. gi { l²i j gi {
Àu|qw gn nʃ4^ñgn^ñndgp²u g| j v³wg ng c r^xgi v
²u c|²lu|cnc o²i ngw hww gn o gngw^ñpn0
G| gnd n c j gi {gnd n crki n³u|km nk xcrcok c x^ñ/
d n fg c vpi gt crwgr³i vglgf gno gugn0

Co knqt Xqf leunc vku| vgrpf Àt o gi j cmqwc c|
 2lu| cnc gugo 2p{gkv. 3/pn2p{vgrpÀnhgm2 nqw<

ô J^av cmqt o kpgm x^atvc o 2p c| wc|^auucn
 o^alwu »c0 Hngo c l2ijgi {gnv n²u o²i ku vcf n/
 nq| vo xgnÀn0

C dgppÀpngv n2/4Àn2/4gn n2/43/4w ng| fvg o^at^av
 hÀtpk c pcr0 C| cuu| qp{qm rt²o gu dwpf^alc Àtc
 rngtÀv c ncdkpc. ku²vp{^at ng| fgwrgppk00

O ci { ct o kug c j wnf o qnqp

Xcu^atpcr tc c-j cl» u| go 2n| gvg uqm o kpf gpv
 ¶i²t0 P{qre pcr »c o^at pgo n²wpm o^auv. o kpv
 gi gv²u xk gv. c| | cn ngeugi vgwgm j qi { co kpv nk/
 p{klwm c u| go Àpngv. o^at gn wÀpm ngu| c u|^atc| /
 h2/4f. vgt o 2u| gvgup o²i eucm Pgy Hqwpf rpf
 u| ki gvg. fg o²i ku eucm gi { nku x^anq| cvqu^ai 0

Tgo 2p{gkondgp pci {qp eucn»f wpm o gtv c
 ngi {gvrp n2/4 Àtc dktvni dc ngt¶gw dgppÀp/
 ngv. dgdqt¶qw^a x^ai nj cvvcp n2/pv2/dg²u nē/
 l^apwn gkqpc gn nÀpm c nki^av u0 Cpp^an pci {qdd
 xqrv c| gmgp²v. kpgtv c| 2i vku| vc xqrv²u fgt u0
 | i gv gp v| 3/4w c per. ki c| k u| 2r p{^atk kf xqn0
 euw^ap c n²vj cv²tv|^a tv²mgn c j cl» wcuck gn n0

C| cpi qm gi { nleukv dqu| cpnqf vcm fg
 c| w²p o gi p{wi qf vcm²u kuvpku| vgrtg xqpwncm
 xku| c0 C | uqn^atqm^a j ¶cvqu o gn^af k k u|^a mcm c|
 2i hgr²0

Mcvj qknwu kuvpku| vgrv ku xqn0 C i {gtgnm
 l^avu| »u| qd^a l^adcp^a n¶qw^a m hgn c| qn^atv²u n²v
 nēpcfck htpekc rcr o k²| gw0 Dk qp{ crki xqrv
 wpm c mÀv/pdgp ugo v²i cu vgtgo dgp ¶| gp. xci {
 v²gp³/gp0 Dg^an¶qw c jcto cf km qu| v²n| t»n c|
 3/4gi Uqo qi {k d^aeuk²u nēnēuck hqi vgej pknw0
 Pgo cnet²m dggpi gfpk ngv. o gtv c o k²v eucm

c nēdkpwcūqm ul^ao^atc tgpfg|v²m Uqo qi {k d^aeuk
o²ncvrcpūqfxc o qpfqwc cpi qnwx

ô | p gffki Āi { wfwco. jqi { c l» Kūgp
cu|gtkp v qu|v²n|q|vc j²kgk. jqi { c|qm gddgp c|
²rgwdgp l>v xci { tqū|cv eugngmf vgm pgo wf/
wco. jqi { gnu xci { o^auqfkm jcl»qu|v²n| ul|gtkp
dqeū^aqwc xqpc o ci^aj q| c| go dgtgngv(00)

G| qn{cp²tx xqrx jqi { glgn w o gi ngnmw
jclqpk0 C n²v o ci {ct dw|i»p ko^af nq|qw c|
»eg^ap j w²o c|p c| gi gmw^aj q| (00)

G| gn c|qpdc p o²i pgo xqrx o gi qrfxc c
v²ddk ul^a|pgi {xgp o ci {ct Āi {g0 Xqfkeunc cr^av
r²d^apqu Āi gpi gf²n{v n²tv ctte. jqi { j²vh p tgi/
ign c o ci {ctqm ul^ao^atc vctjcuuqp o ku²v²u
ul|gpvdgu²f gv0 Gttg o^at pci {qdd jgn{ ngnmw²u
c jcto cfkm qu|v²n| p k v²tuci »vto²v dqeū^al/
vq²v²m tgpfgmg|²u²Apmtg0

Go dgt/go dgt j^av²p ul|qtqpi qw²u pgo eucm c
o ci {ctqm l³4vgm gn jcpgo c wvqm u v c pci {/
o ci {ctqtu^aik p²o gvgm ku0 C| gi {km nk^apfqtn»
o kpx^an0 C| cteqmp qrxcupk rj gvgw0 O kpf/
gi {km j c|ci qpfqrx c| qwj qpj ci {qw ul|gtgwgk g0
Oci c gn w c dk qp{vrcpu^ai. c pci { u³4²v x²
o³4³4v rgfki o kpfgp. cok c ul^ao^atc²t²v²m²u
nkpeu0 Gi {kn/o^aukm n³4pp{gv o qt|uqrv ul²v n²ti gu
wlckn³4³40

C ul|gpvdgu²f c tgpfn²k²rk kf nj³4 cmen/
o c|nqf qw0 C vku|vngpf cv{c c i³4³4 o kqn>i k/
d»n xgwg r²rf^al^av0 J kxcvū|qw Cgpgcu gug²tg.
cnkpgm x^atqu^av hgn {Ālvq^am fg o gi o gpvgw
²u o ci^axcn xkwg²f gucv{l^av²u c j^a|k kvgpgk0 Gddg
nrcuqnc dg c nk^apfqtn» o ci {ctqm uqtu^av0
C o ci {ctqm ku o gpgm^appgm c xk^aij^adqtĀ^anen
hgn {Ālvw Oci {ctqtu^aid»n fg o ci wmen xk/
ul|km cppcm c| qtul^aipcm ul|gtgvg²v. cogndgp
d³4eu lĀmtkpi qw²u ul|²k²ndgp xku|km c| kvgp/

h²rgn g0 Wciv c|qntc c pgi²|u²i gntg. co gn(gm
 t¹lwm x¹tpcm c| À jcl¹dcp. fg jcpiq|vcw.
 jqi { cjql c pci { p²rjg| o gppgm co gn(o kpfki
 dct¹wf¹iqu xqiv k¹pwpm ²u co gn(vñp c rgi/
 v¹dd o gi²t²uv vcp¹qwc xgn¹pm ul go dgp0 C| cp/
 i qmntc ²u c| co gtnkntc i qpfqiv. cnkppgm n¹/
 ul ³pj gl¹m i c|fcu¹ik vñtc¹m¹uwpnev c xkñi/
 j¹dqt¹ w¹p0 Dgeu¹rgvu ²u fgt²m o wpn¹xcn o kp/
 fgpv gr²tj gvpgm c|qm cnkm qwjqp c o quvjc
 xku qp{qm n¹³⁴w pgo wfvc m o ci wppcm o gi/
 hrgn gi | ku vpeka vdk vqf¹cpk0

O kpf gpnk rñj clvq w hllgn jcmi cvqw. o clf
 ¹lcvqcp ko¹fnq|vc m gn c Okv¹¹pnqv ²u ©fx³⁴/
 r²i { gv0

C h³²²ñ gv²p o¹t o kpf gp go dgt c rctvc/
 ul¹m¹u i qpfqiv¹xcn hqi rcmq|qw. wi {cp o²i gi {/
 n¹v pcr qf¹ki. fg c ul¹tc|h³²f o¹t hqn(vq p m¹f k
 hgr²pm c| Af x³⁴rg²v0 i Gn ul ³⁴ xcu¹tper f²nw¹p
 lgrgpvng|gw c| À xkñi0 O¹t dgpp l¹twpm c
 U gpv N tkpe/³⁴d¹dgp. fg ²ul tgx²vgn¹m ukm¹wppm
 gnc pci { n¹³⁴ o kwCp¹vqquku|ki gvo gmgwku0

Gi {/n¹v uk¹n¹ c|qpdc p o¹t gn¹qi cvqw jql/
 |¹pm o kpvgi { lrg|xg. jqi { pkpeugppm o guul g c
 rctvqn0 C|w¹p jcl»m v pvgm hgn c n¹vjcv¹tqp0
 Grkpv g eucm gi {/ngw. n¹u gj d o¹t j¹tqo/p²i {0
 U²r. xcñdcp pci {qp ul²r c vgt o²ul gv h³⁴u²i gu
 p{wi cm c. c vepi gt x²ijgvvgn¹²i g. fg v¹ pcr k
 wc|¹u w¹p o grgi u²i hqi lc gn c| go dgt ul¹x²v
 ctte c i qpfqivtc. jqi { vrg gi {/n¹v nkqo²vgtg
 c o¹ukm jcl»p ku go dgtgm xcpm ²u ²rrgp qn¹cp
 x¹i {cnq|» ul gtgvgn p²|pgm hgr²pm o kpv cjq i {
 o k n¹i²tl¹m hki {grgo o gn¹wnev0

X²itg c n¹³⁴ ku gpi gfgw. fg eucm dcmrfciv jc/
 ucfv h³²² u o³⁴³⁴vg c pcr n¹nguul¹ng jgi {gntg
 xgvwg h²p{²v0 Okpvj c c tkf gi lfv{qiv xqv¹m
 xqpc gn gi { rkmpevc xcico k hgn²i gu Eqtv¹

nʀr gn w0 Gffki c|v jkwgo . jqi { eucm c pci {
 h̄cpekc o guvtpgm xcppcm kn{gp euqf^arcvucp
 h̄pgo . ^awgv| u| p̄gk o quv xgwgo ²u|tg gn u|^{3/4}.
 jqi { c j cpi wrcvq v kn{gp kj rvgw r krcpcvqm»n rqr/
 j cwc gr0

C|w³p c n̄f̄ rcuucp/rcuucp vx^add qu|rcf q/
 |qw0 Ok ku n̄f̄ gngdd o gpv³pm c rctvqij q| ²u o^at
 u|cdf u|go o gn nk r̄jgvw xgppk c u|^atc| h̄f̄
 euk n̄kv. c h̄n{vpp o gi u|cnf » jgi {gnv. co g/
 n{gm gn tgm³u| pcm c| »eg^ap xk²dg0 Mku jci^au|/
 nwp{j »m v pvgm gn . o clf crt» h̄rcm h̄ki^ap.
 h̄teuc. p²i {u|^{3/4} rvgu vtp{À vgo riqo qmcr0 C n̄f̄
 c|³p l^au|qw xgn³pm0 U|gu²n{gugp p²j c gncnctv.
 o clf kuo²v h̄nkddgpvgw u t h̄rj k0 C jgi {gm
 qto^atc t^a ãngm c h̄j²t h̄ngi gm Ì { rkr^ancm
 cj qi { p^a nwpmqwj qp. Gt²n{dgp u| qmcr0

C| wcuqm r̄mgu h̄mi²n³uck o kpf gpnk c
 o^aukm qrf cric eucnct0 Xcn»dcp euqf^arcvqu vgo²/
 u|gk v̄pgo²p{ tcl|qn>fqw h̄n c| ²i tg0 C n̄f̄
 o k̄vj c gi {u|gttg gn pv xqpc. c| ²i o^at dqt³u
 xqrv. gt ugp u| ãm³rv. jku|gp o^at gughr² l^atv c|
 kf 0 C pcr r̄p{wi qf pk n̄u| ãn0 C n̄³vj cv³t u|²r̄p
 ngungp{ eu³ndcp u|²u|cnf v c. u^{3/4}²u²i. xkn³o n̄
 u| p̄gn³dp Ìu|qw c| ²i cric. cj qn c v̄pi gt u| k̄v²/
 xgn ^{3/4}u|g²tv0 Xcico k uqj cugo n̄vqw u^atic u| p̄
 h̄ugvgw^a v c| gi²u| n̄r gv0 C h̄rj m Ì { euqrqt/
 quwncm jqi { jco ctquc gi²u| ³l crnwn nk0
 C pcr u³udgp gi {o^au o gn² tcnqw n̄x²ngv r̄jg/
 vgw n̄vpk co k̄pv c r̄p{wi x» pcr v̄²dgp v̄³p^{3/4}
 n̄³ngn0 Jqu|cp j Ì »fqw c u³m^ai. v³xqndcp jg/
 i {gm n̄mgwgm u v o²i o guu|gdd o^at c jexcucm
 qto c ku xk³i p̄qw. Qn{cp xqm= c jcv³u. o k̄vj c
 v̄pi gtk f²nd^a l^au|qw xqpc xgn³pm eucm c| |c/
 xctv o gi c j cpi wrcvq v jqi { wf xcrx gp c
 f²nd^a d h̄tf p̄xc cf lc xku|c c o guu|g xk³i qm
 go n̄ n̄ v0

C vpi gt uqj cugo xqrv qn(cp ul²r. o kpv gl gp
 cl gung0 C per o²i c n¹»j cv¹t ul²r¹p dqn(qpi qw.
 fg o^at c x¹ ul¹pg cr¹ ngt¹Am0 Gr¹lg hrij m ng/
 tAmgm co gn(gm m¹pd³/ o»fqp ul¹tv¹m o gi c
 uwi ctenv0 C|²i gp hngvg. ul¹Am¹u²u dctp^au hgn/
 j m Au¹vcm co gn(gm hqn(vqp gi {o^audc qo nqvc
²u euqf^arvqu ul¹pj cto »pk^anev r tqv¹ncn0 C dA/
 euA » per uwi ctem c o²n(d n o²i gn v¹pk ki {g/
 ng|vcm fg eucm cl gpi gf²ngp{gdd hrij m ul¹k¹l^ap
 wf vcm^a vmtcnqf pk0 Gi²ul gp ul¹Am¹u. rkr¹u l¹p{/
 eu¹hqm v¹peqncm c ul go Am gn w. o clf vgrlgup
 nki {Am cl²i crlc. o kpv c o guul g rctvqnp j c/
 vcm cu v | r wul¹vqw xqpc0 K¹gp hkpqo ul¹pgngv
 o²i cl qrc¹lhuv ugo wf pc x^aul qptc xgvk rgi/
 hrgl gdd rcul vgm|¹pgmgn rj gvg j cuqpn» j cv¹uv
 gr¹tpk0

C| w^ap t^apm dqtww cl²ul cnc0 C jqr¹ x²/
 nqp{ uctn>lc eucm nuw^ap xgvw gi { nku l¹p{/
 uwi^atv c u³/²v j w¹o qntc. co gn(gm eucm qw xkr/
 rpvcmhgn cj qnc j w¹o x²i go gi v¹/0

C|²ul cnc o kpf gpv gncnet» n¹/ gp{g crw²tv
 gn j q||^apm c nku rctvk jcl». co gn(o^at j q|vc c
 ncpfc k hcepc²u cpiqn rcr qncv0 Rctvk gmgp t|
 n¹/ gi gm ku l³/vcm kf gi gp go dgtgm lgrpvcm o gi
 c jcl» vto gldgp. co gn(v³/d o kpv gi { j²vi nk/
 |^at>rci eucm c o l¹pmxqn0

Kvxc{ wpm Mcpcf c ner w^adcp#

O kpf gpnk cl v cr¹ni cvlc. o knqt²tl¹Am gn
 S vgdgeg# C ut n¹/ o kcw hqn(vqp wwwn c jcl»
 ul¹k²p^alc. fg o quv o^at pgo j cncw| km qn(cp
 n¹/²tvkgup²u ngngogv¹Am0 P²j c c n¹/ d n
 hngngv ner vpm0 Kv l^atwpm o^at c tgpfgu jcl»m
 n¹/³/v rgi hrgl gdd o²i pgo n¹vlwm ng0

Gnu »t»f pemc o ci {ctqm000

S wgdge. *ö +

Oc tgi ign kw jci {vcm dgppÄpnyv c o ci {c/
tqn0 C| wi {cpku c tgpfulgt. jqi { c nk^a pfqt»m
nku^a npcm S wgdgedgp. mÄp gttg c e² itc nfu¹ ¶
vgw ìeqnpkuvè xcuÄk nqekndc ngtÄpym² u ¶ {
o gppgmgì { gpgugp Y kppk gi dg. v¹ xqnP {wi cvt0

C o k wwpm gi² u gp o^a u0 J cl»p o gi {Äpm hgn
c U gpv N tlpe/hqn{co qp. co gn{ c xk^a i ngi u² ng/
ugdd hqn{co ck² u O qpvgerdcp xci { gugvgi eucm
o^a t P {wi cvqp vñ^a mu| wpm c o klpmmgr0

O² i vgi per² llgn² tng| vÄpm o gi c nk^a w dg0
| rrgp² ll² n xqm. eucm c o cicucp hgnx x^a tqv
xkmp{qu^a or^a k l² p{ngwgm² u c nk^a w gi {j cpi Ä
n² rg v² twv gr² pn0 J quu Ä o »n». o² i j quu cdd tcm¹
v² temen hÄwÄm r² gfi gi { tgwpgvgu pci { grg/
x^a vqt c icdqpc u^a o^a tc. jku| gp c| qp c hÄf³ p
xci {wpm c j qn gi { vgtÄpvgp c| gi² u| xk^a i qp c
ngi vÄd icdqpa^v vgtogkn0 Gi { euqo » u¹ pr^a t o² i
o kpf³ au| g. co kvc x^a tqd»ng^a twvc n² r^a t n² r0

C j cl»pm u| qtqucp qf cuko vn c o »n» fgul n¹ k/
j q| 0 Nggtgul vkm c hgn^a t»v ku. u| »xcn o gi xcp c j c/
l»pm³ au| gn^a wgv² ug c u^a tc| hÄf fgn fg o^a upcr
tgi igni pgo u| cdcf ugnlpym ugo nku^a mcpk
o gtv eucm j clpender n² r c j cl»tc c ncpfcck dg/
x^a pfqtñuk dk¹ qu^a i0 C j cto cf km qu¹ vñ^a qp o² i
p² j^a p{cp² dtgp xqncm fg c| v¹ p ukwgm rghgnÄp k
o gtv o^a upcr tgi ign j cvnqt u| »n o^a t c|² dtgu| v
eugpi 0

C| gi² u| vgi per k per kuo gtngf² uugn vgnv gr0
C o ci {ctqm det^a nu| vcm c| cn c| qtu^a i i cn
co gn{ gugvgi Ä j c|^a lwm ngu| 0 C| kuo gtngf² u pgo
² rrgp l»n ukngtÄn0 Gi² u| gp f² ri c pci { nÄ o kcw
pgo o wcvnu| qw c u^a tc| hÄf0 F² n hgn² c j cl»

ugo wfqw gn ddtg lwpk eucm hqn{vpp wwwx.
 o kpvj c rcpcl nqf pk cncpc0 Gi { nleukv gn ku v²/
 xgf v²pn0 O gi ngl f fvgm c o²t²ugm²u^a nwwpm
 xci { o^a ul²n »t^a ki²u c| w³p ku eucm rucp j crcf/
 wpm gn tg0 O kpf³u| g eucm cpp{kv r¹ wpm j qi {
 c x¹ o^at pgo n²m rku| nqucp |³f gu. o kpv vxcu|/
 nqt. ^a tcf^a unqt c Fwpc xk²g0 Dgpp xqnwpm c U| gpv
 N tkpe/hqn{co hcm} j cdlekn³/⁴0

F²nw³p j k vgrgp grtgr Av c n³40 Gn u|³/⁴ dcr»n
 u|^a nv hgn0 Crceup{ j gi { gm o wcvnq| vcm co gn{ gm
 c|^v p gnqt Av gm²u crt» nku n³4 u²i gnpgm cf vcm
 j gn{ gv0

Lqddt»n hguv kdd. fg rncvpcdd c xk²n0
 C fgo dqm²u c| gr²i o ci cu j gi { gm i { cntcp x^a n/
 l^a m hgn gi { o^a uv²u o kpf nk xcp r^a tp^a | xc f Au p³/⁴
 x²p { | gwgr0 Kvqw j gi { u| cncf² nqm o clf xcrc/
 o gn{ kmcr t»dd hqn»^v/⁴ o ci^a pcmwcv0

O^at r¹ v| qvcm c pci { j gi { gm^a tp{ck ku. co k/
 nqt c n³4 A¹tc t^a pm Av0 | i gv gp hqttqw c r²xgi .
 o kpf gpnk r²xgvwg c ncd^a v^av xci { c hgu i A/
 p{^a l^a v fg c n³4² pm hq»f» hgj²t i { t o gi d²p¹/
 vqc r¹ v³ uwpnev0 P²j c/p²j c gi { /gi { crt»dd j c/
 l»eunc^v/⁴ v^a c n³4 d³4^v p² pgm hcr¹ v²u o gm²v/
 v² pmuwc p v gr0 G| xqv o kpf gp. co kv¹ vj c wwpn0

P²j^a p{ »tc o A¹xc o gi vpc c n³4 gl v c dw/
 l»eunc/l^a v² nqv. x²i rgi d¹ Au Av xgw v n² pm²u dk/
 | qp{ ugpnk ugo uclp^a nc v³ xqn² v²0 Gi { kf gli o²i
 gt m³4³ w. c r¹ vj cv³ t u|² r¹ p rt»d^a nc grkppk c
 nk¹ v³ uv fg c| w³ p cddepj ci { v j k^a dxcn» l¹ tcf/
 u^a i qv0

Co knqt u| cdcf xqv c r¹ vj cv³ t. r¹ wwm eucm
 ki c|^a p. j qi { o kn{ gp »t^k uk hqn{co dcp Au v² pn#
 J^a tqo u| qt/p²i { u| gt qn{ cp u|² ngu o kpf n² v qrf c/
 nqp. o kpv co k ft^a ic Fw^a kpm p²j qn gu| m² n fg
 o²i qw ku xcp n² v| gt xci { j^a tqo u| qt qn{ cp vgt/
 lgf gm gu. o kpv c Ngi pci { qdd o ci { ct hqn»0 C v³/
 0

xqn^ai qm qn{cpqm j qi { c u| go pgo ku wflc^av
 hji pk o kpf ki Ài { n^av| km o kpyj c c rctv h²m³/
 dgp hji p^a v c jcl»v0 Kw/qw crt» u| ki gvm co g/
 n³gm n³À n³v³/d j qu| Àc p{À n²u c ngungp{ h³/f/
 u^ax j qu| cp n³tk j cl»pncv0 Oquv o^at nk ku cnc/
 mwn xcrcok^ancn³pqucdd n³r0 lqdd»n kpn³dd
 u³ncdd xk²m c| go dgtk mwnÀc u^ao qu p{qo^a/
 xcn dert»n r g f ki i {³p{³4 j gi {gm j cvcm cu
 gtf u²i gmng³0 J c c j gi {gm eucm gi { rkn³pcxc
 o gi u| cncf pcm o^at ku h³kn³ppcm c| crt» h²t
 j^a| cm nku hcto qm o clqtqn0 X²i p²m³Ark³/d³/m uq/
 tq| cvc j À »f km co gn{pgm o²n²p guvgh² c r ku/
 n³nq» xk³i qu^ai^a t wlc eucm g³o j qi { qw o^at
 go dgtvxgtvcp{^av0

©i { n^av| km j qi { gttgh² n³p³ugp c per ng/
 o gp²m u²r gn0 C P ci { X³ gp. cj qi { c| urcm»m
 g| v c hqn{co qv j³v³m qn{cp xqnv c per^a v xq/
 |^auc. o kpyj c. xcrcok hwwtkuc tgp f gl n³trgv/
 | gw xqpc0 C hngv²i o^at j cvcm^adc ngt³lgw
 o kpf gpv. c^a v xqk j gi {gm n³ngu n³xqpcck c| qp/
 dcp²ngup gn³v³gm c j^aw²t u| À ngu²i²v r0 Qn{cp
 ngo²p{ xqnv c x^arcu²m o kpyj c c vto²u| gv ku
 mwku^axcn fqi q| qw xqpc0 C| w^ap x²nq{ g| À v/
 gu³m n³gw³gw. c hqn{co pcm c j gi { n³d^ap^an
 j cmi cv» eu³/p f gu j cdlc o clf c ngungp{ u| ki gvgm
 o kpf gp dqt^av o²i u| cdcf u| go o gn ku nk ngj gvgw)
 xgppk0J^awnc|^atp{cm kwr g f ki c|²n vto²u| gv0

O ci c c per gi {gp³gvu x³/³u nqtqpi xqnv.
 co gn{gv pgo^atp{²nqnv ugo o k²ng h²j 0 O kpyj c
 c mwku^av j^awn nk^ai³m xqpc²u x³/³u rcr³v
 tci cu| vq³m xqpc qf c0 Ncu³/rcu³ ngllgdd j À
 | »f qw²u j k vrgp gn pv. qn{cp r qpvucp. o kpyj c c
 tgp f gl wcu³v³uckv n³gw³xqpc0 Gttg gi {u| gttg
 h²i {À n c| gi²u| xk²m n³pi dcp^anq³w c| gi²u|
 n³vj cv³t0

G| ugo vctqw uq^aki 0 C n³4 dgp t^apmgtgu| ngf

j k f g i o k p v j c n k q n q w c x q r p c c r f p i q n e v x c r c o k
t k f g i u l ã n g u ² i h q i q w d g o k p f g p 0 C | g u v g p { w /
i q f v ² u e u g p f g u n g w 0

C p c i { x k ² p k i c | a p o g i j c w » c p { w i c r q o 0
E u ³ p f g u g p Æ u | w p m c u ³ 4 ² v d g p . e u c m c d g p p Æ p n g v
h q n { v p p n f u ² t d » k a m r k t q u u | g o g k x k f i f q w e n 0
P c i { q p u q m j g n { Æ w e u g n f n c x ¶ . v g j a v r q p v q u e p
n ¾ 4 Æ n n g m ¶ f p k c j c l » m q t u a i Æ k a w 0 C r e t v » n
g i { / g i { x k f i f » v t q p { h q n { v p p ² d t g p n g x . o q i »
u | g o g n f u ² t . o k p v j c v g p i g t g p l a t p a p n 0 C j q r f k u
a m c p f » c p r k u f n q n d k q p { l » o c i c o k u g r e n f /
w o . e u c m c n k n ¾ 4 ² u r f t o a l a t c t k f w o h g n o k n q t
o a t q w p { Æ w | q w c p c i { j c l » . c p c i { Æ l c w a p
c | g n u r k j g p p ² r 0

O k p f k i c | v j k w g o . j q i { c n k a p f q t n » m d Æ u Æ /
| a u c c j c l » w n d k q p { q u Æ p p g r ² n f g u g d d h q t o a m
n ¾ 4 ¾ w v ¾ 4 v ² p k m j k u | g p w r e l f q p n r r g p g m q t r r /
p g m n k g n u | ¾ 4 Æ j c | a l w m h ¾ 4 f l ² t g . c | v j k w g o .
j q i { u | f k Æ m ¾ 4 u | g u | q t w a u a p c m n g i c r f d d x c r c o k
f e m c n c f p c m n k h g l g ² u 0 P g o ¶ { v ¾ 4 v ² p 0 P ² o a p .
n g j c l v q w h x g n u k v p g m c | Æ x k f i v c r l a t c 0

C n k a t » d g x c p h g f x g c | g u g v n i g u g u g m g p 0
C | g i ² u | q n { c p . o k p v x c r c o k j q u u | Æ r k u | v g u | u a n 0
D g r r p g m c | g i { k m p { ¶ f u q p . n k r r p g m c o a u k n p 0
C f f k i p ² | v g o . o ¶ c | w q n » o c i { c t k u g n a x q /
| q w 0 O k p f g i { k m n g | ² d g p x k u | k c r q i i { a u a v c o g n {
t g p f u | g t k p v n ¾ 4 p p { . f g c x a m m c | ² t v i ¾ 4 p { g f v c
t a l w m p g j g | g f i q p f w r 0 C | g i ² u | k f c r e w c | x q n v
c | ² t | ² u g o . j q i { g d d g c p c i { | u a m l c q f c a v G w t » /
r a d c p d g ¾ 4 p v ¾ 4 v ² m c | g o d g t g n g v k w c | w a p o q u v
n k u » t l a m n g v 0

O g p l g p o k p f g p n k q f c . i w t w l q p q f c . c j q x a
u | g t g p e u ² l g . x c i { d e n u q t u c x g k 00

N^a pi qn» ngtgu| vc| ²lu| cni dcp

C UONcy t gpeg/hqr »p. *ō ð

Pci { r rññ vqm u| ²r gp nk^a nñ|qw tgm^a o h^ñ g/
vqm eu^a d^ñ m c| co gtn^aek wtku^anev gttg c nk/
t^a pf wñ utc. vgo ²u| gvgupp m g| v c| wcv ²rr gp
hqt f^ñxc vgu| km o gi 0 Grpf wpcm c Pci { Vexcm
r ctv^a t»n cj qi { Eqqr gt kpf k^a p^ñ v^ñ pgvgk t² x² p
go r^ñ n^ñ ãpm gttg c xk² ntg. ²tk^a km c P lci ct^a v.
gn^a vqi c vpcm c pci { qpk^a co gtn^aek Vqtqp»dc.
nko wcv^a m o ci wnev Mcpcf c wrcf qpñ^a r r gpk
o gtqr qrk^a dcp. O qvt gcn dcp. grlwpcm S wgdgedg.
co gn| gv c| kwgpk^a m d^ñ n^ñ p j k f vpgm c o^a uqf km
I kdcn^a tpcm u v p² j c o² i ²u| cn^a ddtc ku gn/
o gppgm o gtv c| gi² u| xk² m vng xcp v^ñ v^ñ pgr^a k
j ci { qo^a p { qm^a r c K^a v l^a u| »f qw rg c h^ñ ²t go dgt
m^ñ f gm g c| kpf k^a pqm^a n fg kw o² tm| vgm c| co g/
tn^aek u| cdcf u^a i j ctedcp c| co gtn^aekm c| cpi q/
nqm ²u c h^a cpek ugtgi gm gi { o^a ucn ²u gppgm c|
gt rt»d^a pcm gtgfo² p { g c o ck Mcpcf c. co gn|
pgo eum p² x^a gi cpi qn i { cto cv. j cpgo ²t | gm gk/
dgp ku cpi qn c h^a cpek j ci { qo^a p { qm eum o k^a v
c n^ñ grko ãvgo r^ñ ngk² rpn^ñ

P { qre »tc ngj gvgw. co knqt c| wqn» nk^a p/
f qtn» ku gn| ci { v j cl» pnev ²u h^a m^a gpe »tcnqt
o^a t kpf wwpm ku h^ñ h^ñ c xk^a i rgi u| ² r guggd
hqn { co^a p. co gn| pgm pkpeu ku o gi^a n^a r c w^ñ gtg/
fvg. j cpgo c| ³ v Vexcm xk² v xg| gk rg c vgp/
i gtdg 0 Pci { qp ngn^a gw uk^a v ãpm o gtv c| Cp»pk
c vpi gtk n^ñ o k^a w o^a t g f f ki n^ñ v vgrlgu perqv
n^ñ ugw 0

G f f ki S wgdged n pgo uqn^a v r^ñ wwpm euw^a p
p² j^a p { vqtqp { go gm^a f gw c u| go ãpm gn w. c
v^a xqndcp gi { /n^ñ v weec n^ñ n^ñ v. co gn| gm c j gi { tg

mÀu|cm hgn o clf p²j^ap{ vk kmw nkn³4 k 2r Ñgv
vgn kuo gtn²fv²pm o gi 0 C x^atqu ul²ru²ig vj^av
pgo m²d²j²cvqw gn fg gi²ulgp o^au xqnv c| ko/
rtguul k²pm co knqt nkqt²vw²pm c nkn³4 d n²u
pgnk^ai wpmc j cvco cu hqn²» j wñ² o clpcn⁰

C o ci curvqp j cvco cu neu²n². co gn² c|
gi²ul xk²ngv wcrlc⁰ M²4 Ñ²4wg d^auv²chcr²m tq/
o cpk²wu² tfng²u²i u²v²p{qmcr⁰ Mku ul m wg/
e^am co gn²gm hpcul²knwcp eucxctqi pcm K²g/qf²c⁰
Kv/qw n²o dquqf²» l²m^a twl^am gn jqi { u²v²p{qm²
dcp. rctn²ndcp ugo ul n²4m²4 pgmc sw²dgel²n⁰

O k²pc c o Ñv p²|pg ng hngi x^at^ad²n c| c²cpv
m²À f² u tqdq²qn² go dgtgnt²g⁰ Xcrco k kv hnglv²g
xk²i n²ul km o gi grxgp²pk co gn² c o ck t²gi
Ñ²ngk² ngv o gi xgw². c o ci c n²lqi quw²i^a2²v
jcteq² ñ²{ n²lc c| gw²rck go dgt ul go g²u k²i {
k²tg jcl²pf²» wñ²p o²i c|v ku grhnglv²pk jqi {
Co gtn²dcp xci {w²n⁰ C| co gtn²kv c|qp²dcp pgo
n²pp{ c xcn²u^ai d²n nku cn²pc²k² u xku²ct^ap/
i cvk c o Ñdc⁰ Xcrco knqt xcn²dcp H²qpv²pce
l²cepe² n²to^ap{|» 2r²ngw² c e²j cvgw²v. fg jqn
xcp²em o^at c|qm c n²4gn^a —i { gn²pv²m o k²v c|
c| k² gr²gr Ñv. co knqt o²i kn²guo ktg ul Ñ²i
xqn⁰ Oc c neu²n² dk²qp{ ô ul^an²fc. co gn²gv
vnl²g²gp c| gt²gvk o k²vc w^ap. c t²ik uv²ud²cp
3:;5/dcp 2r²ngw²n⁰ 3;48/dcp c| c j² l^atc dg
gi²ul Co gtn²v. jqi { c| gi²ul Ej cvgw² H²qpv²pce
ng²i gw² u M²pcfc gi {km ul²ru²ig r²wul w²v gr⁰
C j² v²l²qw xqnv wñ²p c| Ñ²ngk² ng²u²i ku
hqn²vc c neu²vt²hc pci {u^ai^av o gtv eucm gi {
t²ul gr²co xcf^au^at²n xqnv ul²»⁰ C|»c o^at vnl²g²gp
Àtc 2r²ngw²m o²i o qf²gtp²dd. o k²v gt²gvk²
xqnv c| Ñ² t²ul v ngt²gukm c| co gtn²kv o gtv qv
c n²p{grgo o²i pci {qdd. o k²v c ul^am² gi {2²d
ltq²vcl²p⁰

Fg pgo eucm c ul^am² c| gi {gf Ñk ul²ru²ig

S wgdggpghv j cvcm cu vgo r mjo witkn gn tg c|
 gi {km gn tgp{qo wn» f qo dqp. i ¾¾¾ ¾u uŵŵuÀ 2r Ñ
 rŵv n¾k rg c| go dgt hki {gm 2v. co kpv r g f ki
 vx^a dd ukmwpm c ekscfgmc njo qt hgp²i g ncr
 o gi 0 Gt ugp j cuqprŵv c o k I gn²tj gi {Apntg.
 eucm u| gddgp xcp nk²r g| xg 0 C d^au^am c neu/
 v²n{wn xg| gypgm h¾hgr² 2u c j cl» u| gtp²n{g| gvg
 pci { ¾vgn²i i gn o ci {ct^a||c. j qi { g| c| gi 2u
 xk²m c U gpv N tpe/hn{co g| gp u| cneu^a pcm
 rgi o ci cucdd r qpvlc. j^a tqo u^a| pgi {xgp n²dp{kc
 xcp c rctv»n 2u ncvpckci wcmqf km o guu| g
 n¾p{2ngmp 0 C| co gtnek h²Äi i gvgr²i k j^a dqtÄ/
 dcp c| co gtnek eucrcqm o gi rt»d^an²m dgxgppk
 fg g| c n²trgvnxf cteqvxcnqv 0

Gpp{k n¾ÄdgnÄn c hguv kgu²i. co k o²i xcp.
 c| o^at rt»|c 0 C j gi { n²d^ap^an j^a|cn 0 Kw n²wpm
 gn u| ¾ n¾grt n vkrknw ncpfcck krgvg t²ik uŵŵ
 nuÀ co gtnek h^a|cnev 0 C| co gtnek go dgt
 vto 2u| gvggp o gi u| qmc. fg c| gwt»rck go dgt
 u| go 2dgp Äi { hguvpgm o kpv c l^av²n^a|cm rpp²/
 pgn 0 C v^axqrd»n qn{cp hki t^apqnp²cm v ppgm hgn
 o kpv c xcrcok »tk²uk i {gtgm c o ci c o wrcv^a/
 i^atc ¾u| gtcic u| vqwc xqpc. cj qi { o k rcr²id»n
 x^ai wmn nk c| kunqrdcp c u| Äp²gv crw c hcrnev
 2u i wo ketedkmo o cn ¾u| gtcic u| vqwm ngx 0

Fg pgo eucm g| c| qrfcn k{gp 2tfngnu. j cpgo
 c o^auknp ku uqm cmcm c rppg c hguv pgm u| 2r
 v²lcnev x^au| qptc xgpk 0 Mnggo gu f qo dqrfcn vgr/
 u| »tv 2r Ängveun²mgn 0 P go gi {o^auj q| v²o cu| vq
 j^a|cm j cpgo xcrcogpp{k gi {gf Ä^am» 2u rgi v²Äd/
 pgm c hgn²ug ku i {¾p{¾ 0 C| gi {km gi { nku gtf
 u| 2r²p dÄkm o gi. c o^aukm nku x¾Äi {dg ngtÄn. c
 jcto cf km c f qo d i gtp²v Äk o gi pci {dÄu| n²p.
 c pgi {gf knpgm u| 2r j gi {u| cnef²m cf hrglvj gvggp
 j^aw²tv²u² { vx^a dd. x²i p²mÄ 0

N²r vp/p{qo qp vgo r mjo 0 XgnÄpm wcl|qw gi {

nepefck rcr. cnk o knqt rñwc euqf^amaq^auqo cv.
dÄu| nřp o wcvqwc uqmf[¶]| gu vgo r rño²r Ärgvtg<

ô G| c| gi²u| xkf²m nevrknwu²u pci {qp
xcm^auq# G| o kpf nevrknwu vgo r rño²u o²i o kp/
fki Äcm²r Äpgn#G| o²i ltepek go rñ#

C j^a|cm rucp gröctcfq| pcm fg c v¹l o kp/
fgp²tv nřtr»vñ0 G| gp c t²u|gp grñi u| m xqrv c
hqñ». fg o quv Ätc v^aiwn²u kvqw crt» vxcmf^a
p{Äv»| km gr0 C rctv nkwi^auckp^an ngfxgu. hğj²t.

tj^a|cm ki gp i {cntcp xkf^ai ¶»vqtqp{. o clf o c/
icutc mÄu»^atdqeqm co gn(gp hpppgp nqdqi c|
cpi qn |^au|n0 MÄř²p³ugp cmmqt. co knqt o guu| g
u²vqvk rctvckv c hqñ». c| go dgt o kpf ki nřvñ/
ngf km x^allqp pgo c vğpi gtgp l^at/g²u jco ctqucp
grñtk c u^atc| h³řf gv)A Xcn»dcp o²i o kpf ki vğp/
igt k jcl» xcp c vñr wpm crcw fg c rku| nqu. |³řf
x¶ jco ctqucp hğř²dtgu| v^am qf q|^auckpñd»ñ0

O kpf gpnk c jcl» hğf²ñgv²tg ulgv gn ngt Äřpgm
c hřp{ nřrg| i²rgm nř⁴grgf Äřm Mcpfc dÄu| ngu²/
i²j g|. c xkf^ai nři pci {qdd j¶ l^aj q|. nři cñ dd m
g|v j kfgvkn0 O^at rñv| km ku o guu| kt rñ0 Xcn»dcp
i ki^au| k hğřfcvqv qřf qvcw o gi²u gi²u|gp co g/
tkñk gu| nř⁴ 3/4m gr0 G| c j¶ eucm Co g tkñ dcp nř/
u| Äj gvğw gn nři cñ dd c j qi { c| gwt»rck go dgt
rñvc0 Mřv grñi o ci cu f qo d qřf crv nř⁴v 3/4u| g.
co gn{ gddgp c| gugvdgp pci {qp hqpvqu. o gtv c j¶
pgo nřj gv crceuq{. jku| gp crcw jcvñ cu vğp/
igt k jcl»m hwpcm gr0 C| gi²u| o gt xcu= tg^apm
gwt»rckntc c| v c jcv³uv vgu| k j qi { o²i eucm c
x^a| c xcp o gi. fg o^at jco ctqucp dghglg kn0

Co kp v nř⁴grdd²tv Äřm rñvwm j qi { j c xcrc/
o kv o²i j q|^avpp²pgm eucm h³ř⁴řgi gu vğj gt
nppg0 Mřv o gi p{ Äřv p²i {u| 3/4 f n c hqñ{co nř⁴
|grg hğř. co gn{ gv c| v³p c wñelf qpnř r r gpk j¶
nřeuqn gi {dg0 Co k o gi nřlc c| go dgtv. c| c|. j
qi { nř⁴pp{ pgm nřeugupgm rñv| km g o gmğw

c|qpdc p qn{cp j cvcm cu gt v nřrxkugn co k o kp/
f gp go dgtk nřr|grvgv hgnĀro Āro Xcuwcm u|cncf/
pcm ^av tclvc. c l^at»ngn go dgtgm cncw»n qn{cp
nleukp gmř v| cpem o kpvc j cpi {^a n0

C xkf²m u|²r²i g pgo o Ārkm gn fg o^at ki gp
ngx²u j^a|cv Āfx^{3/4} 3/4j gvĀpm gl gm ku u|gi²p{gu hc/
d»f²m g v c hgu²ntg ugo rc|ctqncm r²p|v0 Crc/
euqp{ f qo dqm nřk gvn|pgm j gn{gnř pv r g f ki nku
j gi {gm x^am^am hgn gi {o^au0 O kpf gpĀw hgp{ ²u
hgp{ 0 Gi {gu xkf²ngngp o^at o gi ng|f f^{3/4}w c hc/
nksgto gr²u. kv/qw ngu|cncfv c rctv. c ū^ati c j q/
o qm qn{cp. o kpvc r cpcu|nuf» ugd ngppg c u| |
hřf vgu²p0

P go o gu|g c pci { j^řv»n gi { xkcf wnv nřr/
euqn 3/4u|g nřv j gi {gv. j qi { c xcuĀv ^au|cncf j cu/
uqp qf c0 K r qp^an» m j kfcncv ř vpk c| C r qndcp=
cnk gi {u|gt ctthgrř wc|qw. uqj cugo hrgl vk gr0
G| c xkcf wnv vř p j cvcm cucdd. o kpvc rgi vř/dd
gwt»rck fg gl ku xcuqu|nr qnd»n nřu|Āv ²u c p{ř
ř uckp c| go dgt vgnkpvgv nřpp{gp ngtgu|vĀn hw/
j cv. pgo cncf o gi c m nqenř nqp. o kpvc Gwt»r^a/
dcp0 C xcu u|Ānř unř ntg xcp hguvxg. pgo Āv gn c
u|km^am pci { vř/0 gi²v n dk qp{ ř w^ap{pcm pgo
qn{cp ngp{ i^{3/4}. o kpvc co kv o gi²tf go gpg c
vej plnř pcm| c tgo gng0

C|w^ap o^at nkrcmw n c| ^ancnř pqu nřr. co gn{
uqnř ki pgo x^anq|kn0 C rctvqp crt» i { t f²ugm
co gn{gm i {cncp grxgu|pgm c u|go Āpm gn n o gtv
c x^ř gi²u|gp c ř vj cv^at u|²ř ki mĀu|km gr0 J^av
vřtdgp o ci cu j gi {gm nřngu ^atp{ck hgp{gi gpgn0
J gn{gnř pv c rctv hř mř/4 cncndcp hqj lc ^av c nř/4/
p{²ngv. qn{cp. o kpvc xcrc k ko r qp^an» 3/4d^{3/4} kv/qw
u|ki gvgm o clf nřu dd j quu|Ā |^avqp{qn0 P²j qn
gi²u|gp c Drcvqp nř/4p{²ng lwcc| gu|Āpndg0

J quu|Āj quu|Ā »t^anqp ^av o gi {Āpm o kpf gp
o gi u|cnř^ř u p²mĀro T^apmu|cncfv c nř plkwrc0

M̄v p̄rrcn g|gn w o²i l²i j gi {gm o gmgw o gp/
 v̄pm gn²u v̄rk n̄d^a v̄cp ku f k̄f gtgi v̄m c| go dgtgm
 o quv r̄gfi c n̄i u| gm ugdd i Āp{^av ugo n̄j gv gr̄k/
 ugpk̄ C pci { o gr̄i gv ugpnk ugo d̄f̄lc nk c o^aunqt
 o k̄f ki² r̄pm h̄f² r̄j gv o quv v̄r̄ngup Ātu C| wc/
 uqm c n̄d̄kplw̄nc o gpgm Āpgm²u cr̄^auucn rt>d^an/
 l^am c n̄i pkn̄wck k̄f n̄nḡo gv̄ḡp²i glv o gi t³k̄k/
 f̄v̄gp̄k̄

Co kn̄t Ātc h̄gn n̄j gv o gppk c h̄f² r̄j gv̄g. p̄k̄t O
 ḡj ci {wm c J^atqo h̄qn̄» xk̄² n̄²v² u dgppg xc/
 i {vpm c U|gpv R²v̄t vx^adcp O gi k̄p v gi²u| gp o^au
 v̄l²n̄ O C x̄f̄ gi {^an̄c̄r̄p pgo j w̄n̄f̄ o | kn̄ O C » n̄⁴g/
 r²p j cr̄f w̄pm r̄uucp gn tḡ O l̄qdd>n̄/d̄c̄t>n̄ d>l^am
 l̄gn̄ kn̄c| v̄c u| Āmw̄v. co gn̄ gp j cr̄f j cw̄pn̄

M̄⁴ Ā⁴ v̄⁴ p̄m t̄gpi gv̄i u| ki gv̄ O k̄f gi {kn̄ crt>O
 t̄gp̄f u| gt̄k̄p v̄ j qūl cucp j Ā»f km²u eucm gi {kn̄
 o^auk̄n̄p xcp p³k̄²p{| gv̄ O J ceucm gi { n̄k̄u v̄ pc/
 i {qdd. o^at xcp t̄c̄v̄c gi { n̄ku h̄cto²u f̄q̄n̄ q| pcm
 c| go dgtgn̄ O²i c |^av̄q̄p{q̄ntc ku l̄w² r̄gv̄ n̄j̄ cl̄v̄
 l^am c| ^an̄v̄q̄nev²u o k̄p³u| g gi { mw̄{c x̄k̄i {^a|
 t^al̄w̄n̄ Cw̄>n̄ pgo n̄gm h̄r̄pk̄ j̄qi { gm̄>d̄q̄t̄q̄pc̄m
 o gt̄v̄c n̄i l̄qdd n̄gt̄²u o²i ku eucm̄ x̄f̄ O

N^aw̄co o^at kn̄{gp n̄r̄gv̄ Qw̄j̄q̄p. ^atcf^aunqt̄O
 C n̄ku h̄cto qm o k̄p̄j̄c gi {Āx² v̄t̄v̄q| p^apc̄m euv^ap
 c| ^atx̄f̄ x^a r̄u| v̄q̄w̄c x̄q̄pc̄ gn̄ n̄gv̄gi {o^au>n̄

M̄⁴gr̄gu²i u| gt̄ gp c| w̄³p ku²tf̄gm̄ f̄v̄go.
 j̄qi { x̄c̄pp̄cm̄/ḡ ḡtt̄gh̄r̄² o ci {ct̄qm̄A C| v̄c x^ar̄u| v̄
 n̄er̄v̄co. j̄qi { eucm̄ gr̄x²v̄ḡ c̄n̄f̄ O c| gi²u| j̄c̄v̄n̄/
 o cu xk̄²nḡp cr̄ki n̄j̄gv̄ v̄f̄ o ci {ct̄ euc̄r̄f̄. r̄ḡf̄ki
 c n̄⁴p²m̄ pci {q̄p go r̄n̄ḡ| v̄gv̄ c O ci {ct̄ C̄r̄h̄⁴f̄
 gi {gu xk̄²nḡk̄t̄ḡ O

O^at gv̄gr̄gf̄gw̄ co kn̄t gr̄²v̄⁴m̄ Nḡx̄ku x^atq̄^av̄.
 c̄j̄qn̄ c Ȳk̄j̄gr̄k̄ep̄ h̄qn̄» ³/o r̄km̄ c ŪO N̄cȳt̄ḡp̄eg/d̄ḡO
 U²r̄gū v̄q̄tn̄q̄r̄v̄^ad̄cp x̄cp c x^atqū u| x̄ḡO J̄c̄v̄m̄ cu
²r̄ Ānḡv̄m̄ o w̄c̄v̄n̄| pcm̄ c h̄r̄j̄qo^an̄{d̄cp. co k̄ pgo
 ku euq̄f̄c. j̄ku| gp c n̄c̄p̄c̄f̄ck̄ n̄q̄to^ap{|>m̄ p^atq̄p

tgpf gup kw u²ngngn⁰ C rctvc p²j^ap{ u²r kf k/ rknwu xknc vgnkv rg c hqn{vppucp gtgulmgf jgi {/ qfctit»r⁰

Kv xcp c| v^ap eucm tgpigvi nku u| ki g⁰ C j c/ l>pm o gmgw^{Am} uwttcp gn o clf gr²tv^{Am} c| v c pci { u| ki ggv. co gn{gp hgr²r^{Am} Mcpcf c gi {gwgp o k/ rk»u x^atquc. O qpv²gcir⁰ Mcpcf c cmqt c. o kv Gwt»rc. u v xcrc kxgn o²i j cvcm cucdd. xku qpvrnquckpcm u^a o c pgo v³/dd. o kv euqpn^e Oci {ct/ qtu^ai²0 P^anwpm u| qm^am o ci {ct^a|pk j qi { Dwfc/ rguv x^q hgl x^atqu rgw. o gtv g| c nku v³/4|u pgo wflc gr^qpk g| v c pci { o gvtqrqrkn⁰ K{gp n³/4^{Am}/ o²p{gm n³/4³w gn rj|gv n²r|gpk j qi { o k{gp pci { lgrgpv u²ig xcp O qpv²gcir⁰cm j c gppgm c| »t^kuk vgt^{Am}gv rnqu^ai^apcm gi {p{qr²gc. gi {/ v³gf g kv²r⁰

O guu| g xk²i^qv c| gvg u| ^{Am}ngu²i²dgp g| gt²u g| gt n⁰orc⁰ Mkt^{Am}gt^{Am} j qi { c pci { nkxk²i^qv u pgo o^au. o kv c o qpv²gcir⁰cm cpi qn rctnlc⁰ Gpp{ k xkncp{n³/4^v o²i pgo n²wco gi { jgn{gp²u gmqt lwqw gul go dg. co kv gi { uc^{vku} vkn²dcp qrkcuco. j qi { c| gi²u| xk²i^qv Mcpcf^adcp gukm gi { go / dgttg c rgi v³/dd xkncp{hqi {cu| v³u⁰

C| Cp»pk j^atqo j cvcm cu h^{Am}w{gp²uugn lgr²k j qi { o gi²tng| v^{Am}pm Mcpcf c rgi pci {qdd vgp/ i gk nk³/4^ldg cppcm gngp²tg. j qi { g| gt o²t/ h³/4f p{kg xci {wpm c vgi gtv r⁰ P kpeu c xk²i^qv o²i r²rfc t^a. j qi { k{gp j cvcm cu vpi gk nk³/4^v v v wfvcm xqpc²r^qgpk o ci^adcp dgpp c u^atc|/ h³/4f³/p⁰ C³ nku rkn»vjcl» o^at o gmgw^{Am}pm dcmcv. ruucp x^apu| qti wpm gn tg c uqm o »n» n³/4³w. o kv j c c| v c jgn{gv ngtg²pm cj qn nk³/4^jgv^{Am}n⁰ Gddgp c mwc^vudcp fgt^{Am} eucm nk c nk³/4^w pgm h²ngm gvugp pci { c nkgtlg²ug⁰

J kvngp xcrc k u| qn^evcp n²w^ap{ p{ i³/4 rg o kpf gpnk⁰ C|²i gp. c x^atqu h³/4³w nki {wrcf c

j cvcm cu ngtgu|v0 C x^atqu h^{3/4}v Àu| km²u tci {qi .
 v^{3/4}f^{3/4}n c|²lu| cm³dcp0 K³gp ul qncvcp²u k³rq/
 p^an» v^{3/4}pv²utg ku eucm Co g³tkn³dcp i qpfqj cvcm0
 J co ctqucp o gi nerlwm c o ci {ct^a|cvq0 C ng/
 tgu| v c U gpv L³pqu/j gi {gp²i²u c hcto g³gm^arfq/
 |cvn³u|u²i²d n go gm²m cdd»n vctv^am hgn pci {
^arfq|cvcm o gtv tgpigvi xkncp{²i gn o kpf gp
²lu|cm0 Fg Ai {r³u| km o gi²tk pgnkm jqi { c l^ao/
 dqt xk²m ¶i { h³i {gr³gl v³vk c d p^{3/4}u x^atquv ctte.
 jqi { M³ku| wupcm ngn³gw rgu^ampk gi {u|gt c
 h^{3/4}ftg c|²tv. jqi { dgpp³pv³ x²v³gn³nv n o gi/
 u|cdf³u³cp0 O qpv³g^an xcn»dcp gppgm c h³cvn qt/
 u^ai pcm n³pp{ x²t . o w³v³u n³fx n^ap{c. v³g^av
 c h³i {gr³gl v³u²pgo gi²u|gp j³k³dxcn»0

Gn w³pm n³xtqi c x^atqu r³to^au. u|³pgu²rv³.
 h³l³pm h^{3/4}v c|^{3/4}m o go gp³»< c o kpf ki r³pi qn»
 ngtgu|v00

Co g³tkn³ R^a tk³ u^a dcp

*O qpv³gcn *ð -θ*

O qpv³gcn pgo eucm M³pcfc. j cpgo gi i †
 Co g³tkn³ R^a tk³ uc0 O kpf gph³ Ài { j k³fv³km pqi {
 c w³ku³m O gm³lc²u gl|v c| co g³tkn³cm cpp{ktc
 nqo qn{cp xgu| km jqi { c p^at hqn{co^ap^amp/
 f»cp pcrqpw^{3/4}j cvgl gt xgp²i vctv³|n³fk m c
 x^atqudcp0 M³p{gr³Àntg j cvcm cu u^an³f^am²r³Àr/
 vgm c| gl|gtu|qd^au j qvrgm pgo tkn³m²u v³rlgugp
 co g³tkn³ktgpf u|gt u|gtk³pv³tpf g|n³fv³mdg0

O²i ¶i { ku o gi r³gv ugp pgj²| u|qd^av ner pk
 rgfki gl pgo ku qre» o w³v³i. r³ic³dd c o k
 u^ao w³ntc0 Pgo n³xgugdd. o kpv p{qre fqn³tv
 h³kgwo gi { u|qd^atv. u|»xcn^{3/4}u^a|j cvxcpgl gt nq/
 tqp^av gi {v³vgpi { p³rtc. ki c|. jqi { c n³p{gr³o
 qn{cp pci {. jqi { o k crki w³flwm gm³r|gr³l0
 C r^atk³uk crt» u|qd^am w³p c xk³i qu. v³icu jg/

n{kʔi xcn>uʔiicn vgtgo pgm vgv|km c rcfn> u| /
 p{giign xcp dgxqpxc. c dAqtqm i{3/4p{3/4 gm 2u
 h rgi nʔp{gru gvgm o kpf gp u|qdʰdcp mʔp ʔt> /
 cu|vcn vgrg rɣx²r cr ʔten 2u dqt ʔ²mcr0 C hʔf /
 u|qdc vcrʔp c rgi u|gdd. r c|ct hʔp{|2uugn xcp
 dgtgpf g|xg0 Gi {u|»xcn ki c|k co gtnkck u|ᵃm». cj qn
 o kpf gp co gtnkck|»n²t| ko ci ᵃ0

Pgo u|cdcf c|v ugo gʔhgʔlvpk jqi { ur>tqpk
 ku rgi gv0 O kpf gpnk kpi {gp ncr i{wʔv 2u u|crrcpv.
 o kpvCo gtnk dcp o kpf gpʔw0

Mʔv fqqi o kcw l3/4ppgm kfg c| co gtnkckn0
 C| gi {kn jqi { kw pʔpeu cmuj qnkcrqo. kngwg
 eucm rʔp{gi vgrg nqtrʔv|ᵃu= c oᵃukm jqi { Oqpʔ
 tgen pgo vci cfvc o gi vgrgugp hcpck gtgf gv²0
 Pgo eucm hʔqo. xcn>fk hcpck rcth o 3/4 rgi gv
 ncrpk jcpgo c p m ku rᵃtk ukcn0 Co gtnk dcp
 pʔpeu rtqvkʔek. jkcxcmucp kw ugo. fg jc c|
 go dgt gughrʔ x²i ki o gi { c hʔp{gugp o gi xkʔi ʔ
 vqw weeᵃnq. dk qp{ o kpf gp qrf cr>n hgrv p gp
 3/4nʔ4 3/4v j 3/4i {gm o quqn{qi pcm tᵃ. kngwg rqpʔ/
 ucdcp ô c fqmʔtlᵃtc0 C| co gtnkck gi²u| 2xdgp
 ur>tqn i { lk c fqmʔtv. jc nku u|cdcf uʔi qv xgu|
 o ci ᵃpcm cmujt pgo p²|k o gi. jqi { o kg cflc
 nkc ngugtugp o gi ngtgugwr²p|²0

! tf gngu o gi hki {gpk jqi { c o qpvtgcrkm
 o gpp{kg dgtgpf g|ngf vgm gttg0 Tgpi gvi c nku
 2vgtgo. u³4³4. dᵃtu|gt kʔʔ|o²p{0 C jgn{kʔi
 o²n²p rʔtoᵃ|km c Lc||dcpf. c u|qdᵃndcp hcpvcu|/
 vkwuj qoᵃn. nku p mo quqn{qi pcmnk| weeᵃtc0

G| gpnʔkʔn tgi gvi c| ᵃtvcrcpdd o wvᵃi
 ku0 Uqm c ewnqtrcdqrv 2u ug u|gk ug u|ᵃoc c uqʔ
 xgpk ʔ rvgnʔpgn0 Xcp kw xcrc k kʔkʔp tqo cp/
 vnc0 kʔkʔp rcrweuqv. u|to²xgn d²ngxg. xgu|
 o kpf gp rʔvci cw». c|wʔp nku kʔkʔp nʔugngv. o kpv
 pkr r ngv. crt> d tj qm kv kʔkʔp hllgn 2nʔxg.
 o kpv go rʔmʔti {cnev xᵃuᵃtqpcn0 C| ʔ rvg l xg/

xgpf²in m²u kx»jgn{gm xcpbcm cj qn rg rgj gv j /
vɣpkc u^atc|u^ai w»nnku^atcfvvqtñqñv0

O qpv̄tgen c| qpdcp pgo eucm c| ^{3/4}3/4 ^{3/4}m x^atquc.
j cpgo i qpfqu²u fqñ qu k^ap{¶wlc Mcpcfc gi²u
n⁴i c| fcu^aik²rg²v̄pgñ0 Gnu uqtdec c ngtgungf gngo
i»erqpvc0 Kfg ngt²ñ Mcpcfc o kpf gp²t²v̄ng²u
kppgp lw nk c pci { xk^ai dc. xku| qpv c| ko r qtv ku
telc ngtgu²ñ lw c| qtu^ai dgnugl²dg0 Kc|. jqi {
o²i j^atqo lgr̄pv ugdd nk⁴lg ku xcp gppgm c
o qucp hgn f qtu^ai pcm p{^atqp S w̄dge. v̄rgp
rgf ki J cñkcz²u U0 Lqj p. o gtv co kpv c j kf gi gm
dg^am̄pcm c U0 Ncy tgepeg hñ{co dghi {²u O qpv/
tgen gn xcp x^aixc c v̄pi gtv r0 O kpf j^atqo nk⁴v̄/
pgm c lgr̄pv u²i g c| qpdcp o^auqf tgp̄f . wñlf qp/
n²r r̄gp eucm^avcf»^am̄qo^auqm O qpv̄tgen u^ao^atc0
O kpf gp^atw xcu²ñ qv̄ kf gl³p²u kppgp qu| rkm u²v c
j cv̄m cu nkgtlg²u qtu^ai dcp0

O qpv̄tgen v̄ng²u²rgv̄ c| qpdcp eucm p{^atqp
o wcv̄n| km o gi0 O^alwu x²i²p gpi gf hgn cpp{ktc
c j kf gi. jqi { c j cv̄m cu hñ{co qp o gi kpf vj cv
c j cl»^au²u c v̄pi gtk j cl»m o gi r̄v̄i cv̄j cv^am c
x^atqu0 C u| gl qp c| v̄p qm»dgt x²i²ki vctv. o clf
dgi wd»| km v̄rk^am^adc c x^atqu. o kpv c det̄ncpi k
o gf xg0 C| kf²p c tquu| kf l^at^au o kw n̄u dd gpi g/
fgw hgn c l²i r^ape²r0 Kw|vcw j o gpp{ku²i n̄gm
cj q|. jqi { c| wqn» l²i fctcdqm ku gnv pl̄pgm
rgf ki c l²i | clñ udec xgu²n{ gu c n⁴rgn̄gf²u0

O qpv̄tgen h̄rki h̄cpek. h̄rki cpi qn x^atqu0 C|
vi cf j cv̄v̄p. jqi { h̄cpek l̄ngi²v o kpf kññ dd
gn̄gu| v²u n̄i cñ dd c| Ñ r̄vk²rgvdgp v̄nguggp cp/
i qñ xgf rkm^av0 C pci { ngtgungf gngo pci { qdd^atc
c| cpi qñm n̄g²dgp xcp0 Cpi qn^atw j q| pcm dg.
cpi qñm̄pcmf pcm̄no kpf gp0

C h̄cpek^am m̄ñ²p^an̄uc o gi o ctf v̄0 C v̄tuc/
u^ai qm pgo pci { qp n̄xgtgf pgm xgi { gu j^a| cu^ai
ku ki gp tkñ0 C h̄cpek v̄⁴gnx²ugnp̄gm n̄i gt ugdd

v̇ o cu|ck c n̄vqknwu rcrqm eucm gi {gf Ñn O qpv/
tgerdep jcv lgluwc n̄q̄quvqt o n̄f kn0 C rcrqm
H̄cpekqtu^a i dc l^atpcm vpwpk c o k jcl>pmen
ku n̄v wu|v̄rgpf cv{c v̄tv xku|c. cnkm n̄v ²xgv
v̄pwo^a p{q| vcmR^a tk̄ udcp0

Kv ku Ñi { xcp. o kpv c| ki c| k R^a tk̄ udcp0 O^a u
c| kf gi gpgm² u o^a u c dGPU Ñ³vgm² rvg0

Xcp gi { m̄ñ³p co gtn̄ck O qpv tgen co gn{gv
ki {gn̄|pgm o k²n lqddcp nk̄ r⁴gpk ²u gi { o^a ukm
xk̄ i. c| ^am̄pf>cp qv̄cn̄m u^a o^a tc0 C| gi {km
xk̄ i qv o^a t cpp{k̄c nk̄ h̄lgu|v̄w² m j qi { Co gtn̄c
j kxcv̄ncup ku dgr̄ner euq̄>f km gddg c o q| i c̄no dc0
C m̄wddqm gi { Ñv̄gu nk̄^a pf w̄ uq̄n̄lcp xgu|pgm
t² u v. gi { gu Ñv̄gm̄kv̄ct^a m̄n̄q̄xgpek>lv̄n̄v0

C o^a ukm xk̄ i ku n̄p{v̄rgp̄ r̄uucpn̄pv c̄m̄n̄/
o c| n̄q̄f pk c o gi x^a n̄q| qw xku|qp{q̄n̄j q| 0 Gf f ki
O qpv tgen v̄r kn̄wucp n̄epcfck x^a tqu xq̄n̄. c| go dg/
tgm gi {euc̄n̄f qu tgp̄f u|gt r̄cn̄^a uq̄n̄lcp r̄cm̄m
o kpv lqdd^a tc Co gtn̄k̄ dcp0 J c n̄gv̄gp n̄³ñ³ p̄gm
³u|g. c̄m̄q̄t ku c o^a ukm u^a o^a tc c| v̄e^a t>n̄ xq̄n̄ c
h̄gn̄^a t^a u. p̄gj qi { gi {o^a u n̄p{gm² v |cxct¹ n̄0
C x^a tq̄p̄cm ²r̄rgp̄ cpp{k̄ r̄cn̄q̄c xcp. o kpv Dw̄f c/
rgūp̄gm fg uq̄m̄n̄ pci {qdd v̄t Ñv̄gp̄ h̄gn̄| km o gtv
c nk̄ n̄gt̄v̄gu tgp̄f u|gt j^a |cn̄j q| uq̄m̄n̄ v̄⁴ d̄d h̄⁴ f̄tg
xcp u| Ñm̄² i 0 Cw>x̄cn̄ n̄gi c̄n̄^a d̄d n̄v >^a ki n̄gm u|c/
r̄f pk j c n̄k̄gt̄lgf² u² t n̄ eucm gi { nku n̄r̄gv ku c̄n̄/
t̄w̄pm n̄er p̄k0 O k̄p̄f gi {km j^a | o gn̄gw qw xcp c nku
n̄gtv ku. co gn{ x̄cn̄> dcp t̄gpi gv̄gi j gn{gv h̄qi r̄n̄ gn̄0
G| t̄gpf d̄gp xq̄n̄ ¶i { c o Ñndep. fg v̄³ d̄d² o^a t p̄go
o c̄t̄ef j cv ¶i {0 Gi {u|gt gp c|² tv o gtv nk̄ h̄i {v̄m
c| go d̄gt̄m c j gn{d n̄ o^a ut² u|v r̄gf ki kn̄{gp j^a |/
v̄ct³ u pci {qp uq̄n̄lcp n̄gt Ñi0

Kv h̄q̄>f km dg c euḡr̄f o k̄² t̄lc ku. co gn{ o^a t
c j^a d̄qt Ñ >>c uq̄m i q̄p̄f̄qv q̄n̄q| c n̄epcfck cuu|q/
p{q̄n̄pcn̄0 C euḡr̄f v̄ct³ u o k̄p̄f k̄n̄^a d̄d ft^a i c. r̄u/
ucp/r̄uucp q̄f c h̄qi p̄cm h̄gn̄ f̄pk c xku|qp{qm c̄j q̄n̄

Co gtnf dcp xepcem jqi { c rgi pci {qdd nwz wu ngu
eugrf fgvctvcpk0

C rncquf i rgi pci {qdd t²u|g hgrf lc gffki k
j^a| vctv³u^av²u n³/4³u eucnf f k j^a| cmc n³/4³ kn0

Gi { cw»u²v grfi ctte. jqi { c hgn f²upgm m³/4
n³/4pd³4 hqncv o gi hki {grj guu³kn0 C h»nc hgrj net/
eqn»m o³/4³v. c pci {²r³Agvgm v u| qo u|²f u^ai^adcp
o²i qw xepcem c t²ik crt» j^a|cn0 O kpf lf d»n
²r³Aw fg ¶ { n³/4grt n pci {qp eukpqu²u²tf gmgu0
Gngnkvxg c m³/4pd³4 f ¶ u| gnv n c| c pqto^a rku
¶ wu. jqi { gn n xcp gi { nku vgtcu|. cjqn guvghr²
c eucnf r kj gp0 Xci { eucm gi {u|gt gp nk³Apgm c|
wee^atc. xci { r g f ki c|³m³/4o p{k nku ngtvdgp hgn/
^am³cpem gi { nku j k p³v. r kj gp j^an»v n³/4p gm nk²u
g| gno wrcvpcn0

Kv/qw o^at Qgo gm g f km o ci cudd j^a|. fg o²i
g| gm ku lf d»n hqto^an»fvcn0 Xepcem o²i c m³u
vt³Agvngp ku A³ f ¶ u| gu h j^a|cn0 C| go dgtgm uqj c/
ugo cf³m hgn u| ¶ xgugp t²ik²rgw »flwrcv0 Dgpp c
x^atqudcp o^at pgo rncpcm c t²ik o »f qp. fg nk³/4/
v³/4gm c m³u^atqudc. co kv p^anwp m J x³ux³/4i {gv
hexqt k^a n^amc i c| fci qm00

Xepcem qn{cp d²tj^a|cm ku. co gn{gm o²i ki {g/
ng|pgm c t²ik kn³ k»nev o gi jci {pk0 Gi {o^au
o gn² ²r³Agvgm tgpigvi uqm kn{gp j^a|cv²u c|
go grgvntg hcpvcu| vknwcp ncp{cti» n²reu m xg/
|gypgm hgr0 C n³u³At n n²vjcv» n²reu j^a| hgn t²u|g
u| »rgu vgtcu|. cj qnc eucnf o wrcv²u| »tcnq| kn0

M³/4p³4gp c o guu|gdd gu rctvqnq xcp ngnq/
o gu²rgv. qn{cp. o kv gi { h³Atf jgn{gp0 C go dgtgm
nvdlenqpcm c x ¶ dgp. eu»pcn³|pcm²u c o qvt/
eu»pcnqm d³i pcn0 Eucm A³ { h³Atf n³/4gp{dgp o gp/
pgm hgn c rncudc c x ¶ o gm n c| go dgtgm c| ku
i {cnqt k n³u^ap|. jqi { c p m vkm»dcp cw»p l³p/
pgm rg c rctvj q|²u c nqek c f f k³ x^at. co ¶ c

hãf²u wt⁰ Co gtnf dcp g| pgo Àu¹i. o gtv kw
pgo pci {n¹r un^{1/4} pgmc| go dgtgn⁰

O ci^a dcp c x^a tqu u| ¶^{k2} dgp c| ²rgv ng| f vng
ugp co gtnk pci {x^a tquku ngpp⁰ C ngi pci {qdd
u| »tenq|^a u c| cw» ²u c o q| k pq o gi c v¹ pe⁰ Guv
c rctvngp xcn»¹ i qu cw»ngt| » xcp. c| cw»vgp/
i gt j wñ¹ o | knc eu^{3/4} pf gu xk gm^a tp{² n¹ dcp⁰

C o q| k c pci { v^{1/4} gi gm u| »tenq|^a uc. u| ¶¹ j^a /
| cm pgo wtcmqf pcm Ài { o kpv p^a nwpn⁰ O qpvtgn
wi {cp gr¹ i i c| f ci. j qi { gn ngn u| ¶^v tuwvqnev
j ¶^k lqp o gi u| ¶¹ j^a | ckd. fg gddgp c vngkvgdgp
c| kvgpk rcnqu¹ i pgo qn{cp^a rf q| cvñ¹ u|. o kpv c|
Gi {guAn/f nro qndcp⁰

C r² p| v gi {^a ncn¹ dcp pgj g| gddgp cf¹ a m nk
gttghr¹ 0 C| kvgpkm g| v Ài { o ci {ct^a ||^a m j qi {
c ltcpek o kpf ki vcn² nqu xqiv² u k{gp vngkvgv/
dgp jcvw c| cpi qn rcnqu¹ i tc ku. go grgw kw c|
go dgtgm uqmen pgj g| gddgp u| gtg| v² m c xci {qpw
nev. o kpvqf c^a vc| Gi {guAn/f nro qndcp.

C o x² u| gk² pci {qp ngxgugv^a rf q| pcm nq/
o qn{ v¹ trvqm pkpeuggm tgr tqf wnek»nev x^a u¹ tqn¹.
pcm o kpf^{3/4} u| g. cnkpgm r g f ki g| r cuu| k»lc. c| xci {
R^a tk udcp. fg mAn^{1/4} p^{3/4} ug Nqpf qdcp d¶¹ kmeucn⁰

C0 v¹ tucf cm k² rgv o kpf kn¹ dd c pci { u|^a m»m
vgo gldg xqpw fg o² i gr¹ i² r¹ pm c o ci^a pj^a | cm¹
dcp ku. cj qnc| qdcp ki gp gt ueuc¹ f klgmgi g xcp⁰

Cnknpgmukngt ãn² u cnkmgndwpcm

Dgppãpngv. o ci {ctqnev gu uqtdcp c| ²tfngn
j qi { c| qm c x² tglpm cnkm c tqu| i c| fcu¹ i k j gn/
| gv o kw n¹ p{vgrpgm o kpngv gr¹ ci {pk wf pcm¹ g
gttghr¹ dqrf qi wpk vgtgo vpgm¹ g o ci wpcm Àl
gi | ku vpek^a v² u| gtg| pgn¹ g xcno kA

Gtg c n¹ tf² utg pgj² | hgrgrgv ncrpk mAn^{1/4} p^{3/4}

ugp0 kw. c| gu^a mo^a uqp. cj qx^a wrcf qpñ r r gp
 c dgx^a pfqt»m gn ugo lwpcm ngv gi {gpgugp
 Y kppkr gi dg u^a m^a m²u qppcp o gppgm c m^a p/
 d^{3/4} xlf² ngntg0 K g eucm cmtt l³ppgm j c c r tcklg /
 vctvo^a p{qnlcp pgo wfvcm dqrf qi wpk j c ng^{3/4} /
 vgm²u c| k r ctk Ñ go gndgp n^a t² trigv| pgm xcrc0 k
 p{qo qt^a i qu o gi² nj gv² uk hqt^a uucf0 O gi c| qm
 f^a vi cvpcm kf g. cnkm o^a t hgrf vcm o kpf gp tgo² p{v
 cnkm u| gtgv² m g^a hgrl vgpk g| v c n^a t² trigv. o kpv
 xcrc0 k ngng0 gv² p^a mo qv0 K^v m^a f gpgm kw p{q/
 o qtqi pcm j qi { ngi cñ dd cpp{kv ngt guugpm co k
 d nj c| clwj cvpcn0

O kpf gp o ci {ct hgn² vgp Ñn o gi hqtf wn c o c/
 i {ct nup| w^a wuq0 G| c j gn|. cj qn o gi ngj gv j cñ/
 rpk c| kf gu| cnefv o ci {ctqm r pcu| ck. u»j clck
²u wñ p c| gr² tv gtgf o² p{gnt n ku wfv^a uv ngj gv
 u| gtg| pl0 G² tv o gpvo gn c o ci {ct nup| w^a wutc.
 co gn| O qvtgen h wee^a l^a dcp0 c U0 Ecvtkpc/
 utggv² p xcp0

Gddgp c j^a | dcp xcpem c| kf gi gp qtu^a i qm
 j cw^a i ck c nup| w^a wuqm C rtemknwu co gtnck
 u| mggo g| v pci {u| gt gp o gi qrf qvc0 I qpf qrlvpm
 eucm ettc. o gpp{kv ngm u| cncfi^a rpk cppem cnk
 eucm gi { nku wc|^a uv cnet vppk qf c j c| c0 C| gi {kn
 n^a k² w² i c x^a tqu gi {kn hgr² p xcp. c o^a ukm r g f ki
² r r gp c| gngpng| k^a p{dcp0 K^v o kpf gpv euqr qt/
 v^a q^a wem² u Ftwo o qpf Dwkf lpi qv o kpf gp i {g/
 tgmkuo gtkc x^a tqudcp0

C o ci {ct nup| w^a wu c j cvqf km go gngv² o /
 n^a k² C j cvm cu hgrkq»m gi { rgteli ugo^a m/
 pcn0 C| gi² u| nup| w^a wu n^a v nku u| qdc0 C| gi {kn
 c| grk² | j gn{ k² i. c o^a ukm c nup| wn hqi cf»/
 u| qd^a lc0 J c f f k^a Crdgtv h nup| wn o² i gi² u| gp
 hcvn go dgt. fg o² i ku² tfngnu² u vrcu| vrcvqñ
 dcp i c| fci o Ñv^a m o^{3/4} ^{3/4} v g0 O^a t t² i gp xcp flr/
 mo^a ekck u| qñ^a rvdcp² u c| gr0 Ñv. hgrhqt^a wv kf m

grfi cmem cv u| qn^a newcm c vrcu| vrcv u| gt^{2/}
 u²tg0 Pci {qp hqvqu c| ku jqi { o²i c j^adqtÀ
 gn w uqn^aki xqiv Rkwudwi dcp²u ¶i { o gi kuo gtv
 c| co gtnæk xk^ai qv0 Hqvqucdd rqi ¶ek k Ux^ale.
 P²o gvqtu^ai²u vñp gnu uqtdcp Oqu| nxc0 C j^a/
 dqtÀ nk^{3/4}ug c o kpf gp qtqu| qm e^atl^apcm ut²ik
 h x^atqu^adcp²tv0 Tgpi gvgi gv wc| qw uqm p²rgv
 kuo gtv o gi . pgo d^Àqntcv u| go Ñxgi gp^av p²| k c
 xk^ai qv o gtv jc ¶i { ngppg. gttghr[?] dk qp { pgj g/
 | gp dqf qi vj cvpc0 J c { f k Cndgtv o kpf gpgugt g
 cttexen» go dgt. cnk gddgp c hkuu. ki c^adcp eucm
 o quv nkrmw» qtu^ai dcp ukngttgn x²f gm g| j gk c
 o k²tf gngkngv0

Co knqt o gi n^avi cwco . gi {gf Ñn xqiv c rqu| v
 l^ap0 Kqfcki c| icwlc²u lqddng| g. Xcel gm Nclqu.
 u| cdcf u^ai^av v^{3/4}n^{3/4}wg. c h nup| wn gi {gf Ñn kpv²| gw
 o kpf gpv0

Fqic xcp grfi 0 V^{3/4}dd go dgt Ñn o^at c u| qd^a/
 l^adcp0 Oci {ctqm cnkm jc| chgr[?] n²u Ñpgn0 Vwcl/
 fqpn²rrgp c|²tv l^{3/4}wgo kf. jqi { xgn Ñm dgu²rlgm
 vj^avhgnku jcu| p^anqo c n¹p^amq| » cmem cv0

C| gi {km o ci {ct pci {qp gmgu²gf gw. t ¶hk
 kw ugo o k ugo ukngt Ñn0 C| gugvg gi²u| gp urgek^a/
 rku xcico k0 C| cr»uc o^at t²ik n²pcfc k o ci {ct.
 nkj ¶xv²u o kpf gpv. h v¹lv ¶i²tv. co kv c| v³p pgo
 vctqw o gi 0 Gngkpv g eucm o ci wn n^{3/4}3⁴w xgu| gngf/
 vgm c| v³p v^{3/4}x²p {tg o gpvgm²u o kpv o gu²rk c|
^{3/4}gi o^at kuo gt u gttghr[?]. wflc²u nkkuo gtv c
 xku| qp {qnev. vj^av c| Ìl dgx^apf qtn» j Ìl v c t^{3/4}k/
 fgddg0 J quu| cu cmwf q^auqm w³p o²i ku cfqw
 pgnk o kpv pcr u^ao d²tv 83 fqni^atv. co gm { gn c| v³p
 pgnk^ai qwc| Ìl²rgvgn0

Gddgp c rgtedgp ngl f fkm gn c| c|²rgv. co gn
 o^at²tf gm f²utg vctj cv u^ao qv g| c|²rgv c|^av
 ni dgx^apf qtn»²rgv0

Fqiri q| qw Tgi k^adcp. Ewrct²u n^{3/4}p {²n³p.

co ɸ xqrv o wɸnc j q| |^a u| gt| gw c r²p|²j| g| o²i
 xci { pgi { xgp f qn¹tv Fg c| w³p l^{3/4}wgm c u| q/
 o qt¹ o wɸn¹wɸp pcr qn⁰ O gi j cmɸw. j qi { Qp/
 wtk>dep xcuwcv euk^apcm²u qfc ngm go dgt⁰
 Pgnk^ai qw²u o ɸ A¹tc o wɸn¹j q| l wqw. dk qp {
 gnw| qw :7 f qn¹tv⁰ Fg pgo d^apw. o gtv o gi kpv
 f qn¹ q| j cqw²u r²p| v ngtuj gvw⁰ Gi { »^ttc pgi {/
 xgp egp³gv ncr qw. fg c| gn¹v¹u²tv ng ngnw u| wt/
 nupk pcr qpw gi { f qn¹t²u j A¹ u| egp³gv⁰ O²i ku
 o ctfv xcrc k o kpf gp pcr⁰ Gdd n c| v¹p cpp { kv
 i { l^{3/4}w. j qi { ^{3/4}u| gu| gf v³ c j c| cw|^a u n^{3/4}u²i gk
²u o quvo gi ugo^a m\ crcr^a ki⁰

C| k¹ ugdd h^{1/4}f o xgn pci { qp l>gu| . ²tvn/
 o gu go dgt. cnkxgn gn ngj gv dgu²ni gpk c nɸpcf k
 o ci { ctqm j gn| | g²t n⁰ M²v²xki xqrv g| gp c h^{1/4}/
 f^{3/4}. fg gi { u| »v ugo wɸw¹ o gi cpi qn¹ r gf ki
 cp²m¹n kw dqf qi wpk pgo ngj g⁰ Co knqt Qppgm
 qn¹v n¹tf g| vgo. gn¹du²ng. j qi { c h¹to qp o kpf ki
 eucm o ci { ctqm n^{3/4}^{3/4}w xqrv c i c| fc ngpi { gn cnk
 u| k²v²p pgo dgu²n. eucm pci { qp ngxgugv cpi qn¹⁰
 C xcu¹v²r¹q¹v²up²n u| k²v²p o ci { ct euqr qtvd c qu| vq/
 v¹n dg. euw^ap c euqr qtwxg| gv wf qw xcrc k ng/
 xgugv cpi qn¹⁰ Go dgtgm n^{3/4}² uqj cugo ngt¹n. j k/
 u| gp o kpf ki eucm Kuvpv n gn¹ ci { qw xk²ngngp
 f qn¹ q| qw. c ngi n^{3/4} g¹gddk xcu¹vk^a n¹qo^a u¹w¹n l>
 o gu| ktg⁰ G| c uqtuc c ngi v^{3/4}dd nk^a pf qtn>pcn⁰ J c
 o gi wɸw¹ c¹p cpi qn¹ A¹ { c j gn| | g¹v c| qppen
 gi² u| gp o^a un¹r r gp crcnwpc⁰

O kpf gpnk uqtuc cw¹n h¹i. j qi { o kn{gp hct/
 o gtj g| ngt¹n A J c l> go dgt. A¹ { o kpf gp tgpf dgp
 { cp. uqtuc pgo hqtqi xgu²n{dgp⁰ Gddgp c xk¹i/
 dep o²i c| c u| qn¹u l^atlc. j qi { c i c| fc²u euc/
 n¹flc wi { cpc| qp c nqu| vq²n o kpv c| go dgtg⁰
 Gppgm eucm ^{3/4}A¹pk ngngpg. fg c h¹kv²u vgnkpv²/
 dgp ku pci { qp euc¹fkcu u| gn¹go w¹cm¹qf kn⁰ C|
 gn tg n¹cmw¹qw j c¹xk d²tv ki gp uqm| qt pgo h¹kvk

o gi . jcpgo c| ctcv³u w³ptc jcrul dlc0 ëJ c Kvgp
 cf. Äi { rgu| r²p| pgn³o ku. p²ngf kü. jcp| q| vclc.
 fg gi { kn³o^a ukm cmqt ku ul n³4ugp cf. jc c| Kvgp
 pgnk o^at cfqw0 Gppgm l>t²u dgp c| c| qnc. jqi {
 c lcto gtgm pci { qp pci { vgtj gngv x^ancncm oc/
 i wntc. jqi { h³4f lglngv kpvgl k³gp o gi o xgij gu/
 u²n0 I²rgngv x^au^atqncm dghmgv²ugngv gu n³4³4/
 vgn0 Oquv gl gngv c nco cvqnev²u v ngv³4ngu²ug/
 ngv ku h³4gpk ngm co gn³gv dk qp { pgj gl gp wf pcm
 grkugrp k³ { c| v³p o kpf gpv c dgx^apf qtn»m d t²p
 cnetpcm) o gi ul gtgl pk0

Cnk ucl^av h³4f gv wf ul gtgl pk c|. jc pgj gl gp
 ku. fg dqf qi w0 Kpi { gph³4f gm c| Äi { pgxgl gw
 j qo guvcf qm co gn³gv c xcuÄw³tucu^ai qm kn³wxg
 c| ^anco. cppcm kf gl²p cf vcm c dgx^apf qtn»pcm²u
 co gn³gm c| w³p dk qp { qu hgn²vrgm vrgu³ug
 w³p c x^ancmq| »m wrcf qp^adc o gpvcm^av. o^at
 pkpeugpgm kn³wxg co k o²i xcp. c| qn³cp o gu| g
 xcp c xcuÄw»n jqi { qw c i c| f^amqf^au pgo h³4g/
 v fkn nk xci { r g f k i jc gi { /n³v l» o²i cncf. ô
 co kv c h³oc o gu²rk ô Äi { c| v gnu uqtdcp c| cp/
 i qnqpcm cf¹a n0 Gi { nkugdd dktqm dgtgpf gl²u²/
 j gl. kn³wxg o gi ul gt|²u²j gl nri cr³dd ngm n³vgl gt/
 n³vgl gt³4u^a| f qn³t. co k dk qp { nri cr³dd u^a| j gv
 xgp³4w xci { u^a| p { qn³xcpo kn³». co gn³d n qvj qp
 ku n³gv xcrc³o kv ul gtgl pk0 k³ { c| w³p pgo o ctcf
 o^au c nk^apf qtn» u^ao^atc j^atc. o kv c h³4f/
 o vpc0

Gro qpf qwc c| gmugtgfgw o ci { ct. jqi { gi {
 xlek^aru u^atp { xqpen o gp²p vcn³mq| qw gi { pc/
 i { qdd o ci { ct euqrqtwn0 O gi ³4Ängm gi { o^aupcm
 fg nk³gtÄw. jqi { c| qm ku o wpc³v ngtgupgn0 O quv
²tn³gl vgm o gi²u kf gtgpf gn²m nk ngv c| | cn jqi {
 o clf o wpc³v ncrpcn0 O^at qw xqncm n³v jgv. fg
 ugpnk o²i eucm h³4f lÄm ugo p²| gw0 C o k go dg/
 tÄpm pgo wf cpi qwn dgu²rp k j^av ugo o kv ugo

wf qw 2tf gm[~]ndgp vppk jcpgo hmggtgugw gi {
 v[~]gpj²v[~]g[~]u[~]v[~]pf u n[~]pcfck nk^apfqtqrv o ci {ctv
 cnkc|v^ap^tatqpvqwc lgi {} tg0

Mkgt[~]Am jqi { gi { K[~]ki[~]tevkp Dqtf fki^anc
 ngv kf.g. fg c jcv[~]uⁱqnev ghgnglvw²m 2tv[~]u[~]v[~]g[~]pk0
 Gi {^anci[~]dcp uqm jgn(gp pgo xgu|km pci {qp nq/
 o qn(cp g|v c| kv²|o²p{v. r[~]g[~]f[~]ki gppgm c h[~]ncf[~]cvc
 c dgx^apfqtn[~]nev[~]gn[~]gn[~]|pk0

C|w^ap o kpf gp tgpfdg l^{3/4}w0 M[~]rcvcm qre[~]
 nqu|qv²u mx^at²v[~]n[~]v²u jcoctqucp nko gpv[~]gm c
 h^{3/4}f[~]gntg fqri q|pk0 Fg jc pl[~]peu ugn[~]kl[~]Am dk qp {
 o²i o quv ku u|gpxgf²pgm xcrcj qn co [~]xi xcrcnk
 o gi pgo u^app^a ngv0

C|= pci {qp eu[~]Ap{c. jqi { gi {p²j^ap{ gn[~]Am^{3/4}v
 o ci {ct g|gngv c u|gi²p{ go dgtgngv pci {qp nk/
 jcu|p^anc0 C||cn c| At[~]Am i {gn jqi { dgu²n cpi qm[~]n
²u [~]xi { o clf o w[~]pn[~]v u|gtg| c u^ao w[~]ntc. gn[~]g[~]f[~]k c
 r²p|[~]ngv²u c|v^ap eugtdgp jci {lc ngv0 G|gm c
 ic|go dgtgm m[~]Am^{3/4}ugp c ng|f nk^apfqtn[~]ntc r^a/
 n[~]|pcn0 Co knqt o gi²tng|pgm M[~]pcf^adc. h[~]nu[~]|^am
 pcm j q|^alwm c xqpcvc. o gi k[~]gu|v[~]km ngv. jqi {
 o kn(gp tq[~]u|cm c xku|qp{qm P {wi cvq. c|v [~]xi²tkm
 pgnkn jqi { ^au[~]|^an[~]Am^am ngv c| Gi {gu[~]Am/f[~]mc/
 o qm[~]lc²u cffki xg|g[~]km ngv qttw[~]pn^an hqi xc.
 co [~]xi eucm r²p|v²tg|pgm p^anwm²u c|v^ap eugtdgp/
 jci {l^am c èr^atv[~]qi qm[~]ckn[~]v[~]. gi {u|gt gp o gi/
 n[~]i pcn0

Pci {qp uqmu|qt xcppcm gttgh[~]r[~] kn(gp m[~]dqtn[~]
 go dgtgm o gtv M[~]pcf^adcp qn(cp c| kf l^at^au0
 jqi { uqm c u|g|qpo w[~]pn[~]0 Co [~]xi c| vctv. o kpf gp
 r²p|v o gi h[~]g[~]vgm c o w[~]pn[~]un[~]|²tv. fg c|w^ap.
 j qmu|g|qpdc. ug[~]qi {cp ugo wf pcm gn[~]gn[~]|g/
 ngf pk0

G| c| gi {kn kph[~]to^aek[~]. qn(cp go dgtpgm c|
 gn[~]g[~]u[~]|²r[~]ug. cnkpgm ugo o k ugo ukngt[~]Am0 C o^aukm
 o ci {ct c|cn ng|fv. jqi { j c|co gi { Oci {ctqt/

u^aidc. ogtv dgvgi c r¹dc²u qwj qp c euciflc
 oclf nkn¹À^arlc²u c|v¹p xku|cl³p0 Oquv o^at ku/
 ogtk c f³/₄i²uv wflc o kv ngm euk^arp¹0 Hcto qp
 ngxgugv fqni q|qw. jcpgo kpn¹dd c xcu¹À^ap^an0 V³/₄/
 v²ugngv euk^ancm gi { »t^atc 57ô 67 egpvgv nerqw.
 c nqu|v¹t²f²uv^ai { qrfqwc o gi. jqi { v¹/₄dd v¹tu^a/
 xcn³/₄u|g^amqw²u n¹/₄³/₄ugp vctvqcm ren¹uv²u
 o kpf gp pcr gi { o^aukm h|³/₄v hgn^anx^c0 O^auf²n
²xki xqrv m¹App. r^at j»pcrrcn g|gn w m¹À^af³/₄v j|c
 p²i {u^a| fqm¹tv. o quv pgo xku| ugo o kv ugo o c/
 i^axcn ogtv c jcl»lgi {gn pci {qp o gi p{À¹v¹n0
 Gi { è¹À¹{x²f¹i ng²dg ngt¹À¹v cnk o gi hqu|qwc
 xci { ³/₄xgp fqm¹tl^a»n0 Pgnk ku c| xqrv c dclc.
 jqi { o²i o kpf ki pgo kuo gk c p{gnxgv²u ¶ { nk
 xcp u| qn^ancxc o kpf gpnkpgn0

C jcto cf km o ci {ct o^at kpvgnki gpu go dgt.
 u v xcrc o knqt uqm²u j cpi qu u|gtgrgv l¹vu|qw qf c/
 j|c0 H¹/₄f lg ku xqrv v¹/₄ddg|gt j qrf. fg gn¹u|qw c
 i {³/₄p {³/₄ o ci {ct dktvn0 O^at pgo hcvn go dgt0
 Jcxcp gu|v¹pf u. fg qn{cp k¹o qu²u gpgti knw.
 o kpv c j¹u|gu|v¹pf u rppp0 C|v o qpf lc. jqi {
 kf^avrgwki c|^ap go dgt². kvcpwvo gi fqni q|p¹0

C u|gtgpeu²v¹g¹pu²i À¹f³/₄k fg pgo jci {lc ng/
 i { tpk o ci^av0 Qf c j|c. Xcu o gi {²dgp o quv ³/₄³/₄
 n¹/₄v p²i {u^a| j qrf cv0 J c|cn¹u|À¹v. jqi { ^awgi {g.
 gn¹flc²u c r²p|gp kw xgi {gp dktvnq¹v0 C|wqn»
 pcr ng²i gw o kpf gpg. u v o²i c r²p|g ku dgppg/
 rvu|wn0 5: fqm¹t xqrv c |ugd²dgp²u gi { tqul
 i À¹p{c tclv. co gn{dgp c h¹/₄f gn¹gp fqni q|qw0 Co k/
 nqt o²i l»n o gpv pgnk Euk¹i»dcp gi { det^av^a/
 pcm cl^apf²nq|qw p²i { ³/₄n³/₄gv twj^av²u gi { i {³/₄
 p {³/₄ wc|» d t³/₄pf³/₄0 Co kpv g| o gi wf v c c u|g/
 tgpeu²v¹g¹pu²i gv. xku|cn¹À¹f v¹c nq|hgtv²u c ngi/
 u|gdd o gi o ctfv hngvg twj^av0 G| xqrv o quv tclv.
 qwj qpt»n o^at o gi²tng|gw c| À¹kn¹/₄n²i²u o gi {
 j|c0

Dgpp²Apngv dk qp{ vrf p jcrf nqcp h²4f j³4
 x^ai pc c| kn{guo k fg gttghr² c| go dgtgngv o^au
 lf d»n hctci v²n0 Co ¶ c r²p|²tg x^atcnq|qw. pgnk/
 r²vq w fqmf tv ngtgupk0 Pci {u|gt gp dgu²n cpi q/
 nwn vj^av pgo xqrv pgj²|u²i g0 Gro gpv gi { eki c/
 tgwci {^atdc. cj qn c|qpdc p o gi o qpf qwc. j qi {
 pgo uqmf tc gnwc| km²u gttg pgo cmem c| v²m
 o wpm²upcm fg ³4u|gdct^a nq|qw xgn²0 O^aupcr
 gro gpv u|kp²p. o kxgn qre»dd eki ctgw^av cnetv
 u|gtg|pk0 |rrgp qw xqncm c| cf»jcw^au²i qm cnkm
 c n²p{ xgngv c rgi pci {qdd tgpfgv²u²i dgp vrf n/
 v²m o gtv c wrcf qpqu²u c| ^an²»rci qu n²p{ xgn
 pgo ²tv²wgm j q|^a0 C| qppcn x^ancnq|qw ctte.
 j qi { o kpf gpv tgpfdgj q|. o kxgn gl v c eü|cm^aü
 ku o^at nkcpwnc0 J^atqo perki fqni q|qw²u
 p{qrexp fqmf tv ner qw. c wrcf qpqu o²i gl gp/
 hgn² j^a r²u ku xqrv pgnk²u j c xku|cl³4. ugi ¶u²i²tg
 rgu| c| gj gn{gl nrf²udgp. j c u| Am²i g rgu| t^a0

G| c d^atqo o ci {ct xqrv cnkxgn c o ci {ct nup/
 |w² wuqp gn u|³4 ³4u|genf vco 0 O kpf gi {km dgu²/
 f²d n o^aun²pv crenwn nk Mcpcf c0 O gn{knpgm
 xcp ki c|cA C| v j ku|go o kpf gi {knpgn0 Pg hrgl v/
 uAm gn j qi { gl qn{cp pci {qtu^ai. o kpv gi²u|
 Gwt»rc. kn{gp pci { h²4f vgt²ngv² gi {o^aucn uqm
 gm²v² vgu j gn| gvcremwj cvnk0

G| { fctcd O ci {ctqtu^ai | u| cmj qp^adcp

C| c o ci {ct Ä. cnkpgm j^ap{cvqw²rg²t n
 o^at ¶vco²u cnk jcwcp²xg gm²tg vrg xcp
 o wpmengf xxgn dgu²ng gn j qi { co knqt dcldc
 ngt²Am. gi {kf gki i qpf qm|qw c| qp x^allqp hgn/
 o gplgp/g c o ci {ct nup|w² wu^ai tcA O^at t²i gp
 hqi qn»f km c pci {xk^ai dcp²u o²i cmqt. co knqt
 c o ci {ct ²tf gngngv ku c o qpctej kc u|gt/

xgkpgm nngmw x²f gpk cmem c xqiv c jkxcv/
 rqu ul gtxgm nngwv²i gk n o gi i { | fpk0 C| v
 jkwg. o quv ku ¶i { xcp0 Gij cv³ tq| v. j qi { eum
 t³xf r³vqi cv³ utc wtkm hgn j c| c³vqi cv³ uc gn w.
 gkp²| k c m³pd³ qno^a p{qm ³Äi {²v² u c| | cn
 x²i g0

Cl o ci {ct nup| w^a wuqp c| qpdep o quv o^a t
 o^a u ul gngo gv w^a n0 | tfgm fpk ng| fvgm c uqtuc
 k^a pv² u qn{cp ugi ¶u²i gngv cl^a p^aqwcm hgn0 co g/
 n{gngv pgo ku c jkxcvⁿ jcpgo c| gi {km go dgt
 vgu o gi c o^a ukm dclde lwqw go dgtpgm m³p³/
 ugp emqt. j c c| m³f³ p dca^a vqm p² m³Än v² phg/
 tgi0 Gi { fctcd ki c| k Oci {ctqtu^a i c nup| w^a wu
 c o guu| g kf gi gpdgp² u kfg hgn | ul em j »p^a dc o c/
 i^a xcn j q| v c o ci {ct nup| wn c o ci {ct ul ¶k o g/
 rgi u² i² v. u v c o ci {ct xgpf² i ul gtgv² v ku0 Mgf/
 xgu qwj qp^a dcp o² i c ul qdcg^a p{ ku o ci {ctwn
 n³p^a n² u hrgu² i g. cnk nk^a n» o xgm² i rpi {gn
 cuu| qp{. hqn{vqp c o ci {ct xku| qp{qm w^a p² tf gm/
 n fkn0 Uqnev. u v o kpf gpv g^a guu| vgw^a p m Vtkcpq/
 p^a n vj^a v l»n gukm o gi go n³vpk c| v ku. co kv p{gt/
 v^apn0

J c| fkp Cridgtv h nup| wn eum n³ v² xg xcp
 Mpcf^a dcp. fg o^a tku l»n kuo gtk c xku| qp{qnev0
 Pgo eum c o ci {ct gugo² p{gm k^a pv² tf gm f km
 jcpgo ki gp² f³ pm v^a tucf cm k² rgv² n² u o kpf gp/
 nkxgn³ u| gngt^aÄn cnk xcrcnk gddgp c| qtu^a i dcp0
 O kpf gp i {cto cvqp pci { ul gtr n³p^a mu| km c m³Ä/
 h³f k n³r xlugrgvmpgn0 G| kw ku ¶i { xcp² u c h/
 nup| wnkku j cu| p^a dc c n³p^a mu| » cmem enev0

O kngv h rgi c o ci {ctqm j gn| | gw² tf gngn
 gddgp c o guu| k xk^a i dcp² u gttgxqpcv^a | »ci kp/
 v² | v^apmj q| |^a n³ tf² u0

ô Pci {qp pgj² | c n³pcfck o ci {ctqm j gn| /
 | gv² t n vku| v n³r gv cfpk ô o qpfqcw ô o gtv
 pci {qp pci { gl c| qtu^a i² u c o k go dgtgkpm

ul gtvgul »t»fvcn0 C rgi ngf xgugdd 2u rgi hqpvqucdd
 hgrcf cwpm o gi ul gtxgl pk ngv. fg gl pgo o gi {
 qn{cp nřpp{gp. 2xgm nkctv» o wprñl^atc xcp ul Ām/
 ū²i0 Uqmūqm dgeuĀngvu 2u fgt²m go dgtpgm ngm
 ¾ul ghqi pk jqi { gl v c pgj²| rtqdrñ^oa v xcrcj q/
 i {cp o gi qrf jcuwñ0 C| ki c|k ngo 2p{ o wprñ
 p{wi cvqp xcp. cj qx^a c rgi Ācdd nk^apf qtn^au k^a/
 p{wn tgo 2ñĀm jqi { t³κkf gugg ul 2r gtgf o 2p{g/
 ngv hqi wpmgr²tpk0

ô K^v O qpv gendcp nřĀrdgnĀn gl gt o ci {ct 2r0
 C v²rk ul gl qpdcg gl gm ul^a o c rger cf ¾ul^a | jcv
 ul^a | go dgtt^g0 Mpcf^adcp wi {cpku vgrlgugg mĀřp/
 rgi gu xku qp{qm wcmūfpcm pgo rgi gy ¾ul gj c/
 uqprñcpk gi {gvrggi { o^au qtul^ai nřĀr²p{gkxgn
 ugo 0 K^v o kpf gp ul gl qpo wprñ0 G| ųi { xcp pgo /
 eucm c o gl ic|fcu^aidcp. jcpgo c| kctdcp 2u
 vgrlg^ancrñpqu^aidcp ku0 O kpf gppgm c| qnc c
 vgt²ul gv^k xku qp{qn0 V²rgp xcn»u^ai i cn o gi jcn c|
 2ngv jqi { c| v³p Ālvngt xgno gi kpf wldqp0

ô C o k go dgtgkpnpgm rgi pci {qdd t²ul g pgo
 vcpwv o wprñu. ki c|k ul cñw wprñu pci {qp ngx²u
 l³p kf g. jku gp gl gm ul^a o^atc pgo ku p{kqwc o gi
 ner wkv Mpcfc0 G| gm o^auwv pgo wfpcm grj g/
 n{gl ngf pk o kp v c nř⁴o wprñ np^an co gn{gngv o kp/
 fki vxcul tc ųpcm nk0 K^v l³f o wprñu qntc xcp
 ul Ām²i. c i^a| i {^atcnev hgrgl vkm c xkncp{quo /
 xgngv 2r ųkm nk lqddcp. xgl gv²ngngv hmgvpgm rg
 2u ųi { vx^add0 C| 2r ų²uk kctdcp o^at pgj gl gddgp
 wf wpm grj gn{gl ngf pk o gtv gl gngv c jgn{gngv
 hgpvtl^am o ci wpcm c nēpcfck hēpek^am 2u c|
 qrcul qn0 Co knqt c o wprñpcm x²i g. gm²ngf pgm
 o gtv kv ct^ap{rci ft^ai^add c o gi 2nj gv²u o kp v xk/
 f²ngp0 G| h rgi c| 2rgm gl 2uk nř²ft²ugntg xqpcv/
 nq| km co gn{p²n xcn»dcp gl c ul kw³ek»0 C xk²ngp
 xku qp v gi { nku hgrñtc. xcp c| kctk ekmgpnpgm fg
 c o ci {ct dgx^apf qtn»v gl pgo pci {qp 2tkpv o gtv

pgo pci { hqi {cu} »0 O Ànnqt ku rñ y cwc. o kpf c
nñ v j c | kpf wn» o ci {ct grf leugnfg gw. j qi { wi {cp/
cddep c euk o^a dcp o gi { j c | c. co gn {dgp kf gl^{3/4}0

ô Dgu² r p ãpm ngm c |^a mcpf »cp ngvgrgr gf gw
o ci {ctqnt »n ku. cnkm o^a t t² i k r m »k O qpv t gcn/
pcn0 G | dk qp { pci {qp ngx² u xcp0 U^a o wnev pgo
wf qo j cto kpep^a n v^{3/4} ddtg dgeu ãpk0 C o ci {ct
o q | i cm cndcp lkgo xgu pgm t² u | v. o kpf gpv n
xku | cj ã »f pcn0 Qn {cp o ci {ct. cnk m x² vngu net/
tkgtv eulp^a iv xqpc. ² u co kn {gptg c | co gtnck
Gi {gu ãn / f mco qndcp grfi r² ifc xcp. kw pgo
cnf0 K | gp n^{3/4} ãn² p {gm n^{3/4} ^{3/4} w pgo rñ j gv ctt »n
u | ». j qi { c o ci {ctqm c r qnck² rñ v dgp xcrco k
m ãn^{3/4} p^{3/4} u gdd u | gtr gv l^a u | cpcm ² u v³ tucf cm k v² tgp
ugo ulgvj gypgmgn tg0

ô C o ci {ctu^a i o gi u | gtxg |² ug gm uqt dcp
xcn^a uk cnr qp rñ j vu² i gu. j ku | gp ¶ | { kpf wncm gn
cpcm kf gl² p c | Gi {gu ãn / f mco qndcp ku0 G | gp c
v² tgp o^a t v^{3/4} v² pvgm rt »d^a ni v³ uqm co gn {gnv ² p
o kpf gp gt xgn gn o q | f ¶ qn0 K v l^a tv p^a n wpm gi {
lg | uwkc r^a vt. J go o vku | vrgpf ã. cnk u |^a | go /
dgtv ^{3/4} u | g ku wf qw j q | pk gi { ² tvng | rñ v t g0 Cddep
^a mcr qf wpm o gi. j qi { j^a tqo kf gxcn »uk xg | gv /
go dgt vx^a ddhn { vlc c | ^{3/4} u | g ¶^a uv ² u c u | gtxg | /
ngf² u0

C tghqto^a wuqnp^a n o^a t n^{3/4} p {gdd c j gn /
| gv0 K v Mpcf^a dcp crmwv gi { u | gtxg | gv Wpkgf
Ej wtej u qh Mpcf c. co gn { c r t gudkgt k² pwu. o gv /
f kvc ² u nupi tgi cplvc tghqto^a wuqnev. j c pgo
ku u |^a | u |^a | cñ ndcp. fg o kpf gpgugt g grfi vgnp² /
n {gu j^a p {cf dcp gi {gu ¶ k u g | gm c o ci {ctu^a i
u | go r qp v^a d »n ku j c mcpf »m dk qp {qu^a r f q | cvqntc0
Cmcm c | v^a m o kp v rñ m² u | v Hg j² t O k j^a n { v. cnk
ki gp fgt² m ² u u | gtxg | ngf² u j g | ² tv hcvrgo dgt.
cnk c | w² p j q | |^a ku rñ vqw cnr quckp c o w p n j q | 0
P gnk ku xcp n^{3/4} ãn dgn ãn u |^a | go dgt g0 U »xcn o kp /

f gp k^ap{dcp xcp xcno k o q|i qn^af^au. fg nqo qn^a
gtgfo²p{gnt ndgu²rpko²i ki gp nqtckxqpc0

ô C rgi pci {qdd dclwpmc|. j qi { c o ci {ctqm
pgo vcpw^am o gi c| cpi qn p{gkxg⁰ Uqm pgo ku
ki {gmu| km fg c rgi v⁴ddp^gm plpeu cmemo c t^a0 Qf c^av
c| ^amco qndcp gi²u| gp o^au xqrv c j gn{| g⁰ Cmk
cnetv. c| guk vphqn{co qndcp gnc^la v⁴j cwc c
hgn²v^gp^ãn u| ^ãn²i gu p{gkxg⁰ Kv c hto qp fqri q|/
pcm kn{gp kunqⁿm hgnⁿ n⁴v⁴ u^atc o²i eucm i qpf qrp
ugo rj g⁰ C x^atquqndcp. pci {qdd n³4^u²i gndgp
ciki hqtf wpcm o gi o ci {ctqm0 G| c rgi pci {qdd
rtqdr^o^apm²u o²i pgo cnefv qnqu go dgt. cnk
o gi wf v xqpc xcrcj qi {cp qn^acpk0

ô Rt>d^a m^u| ^auqm v^gto²u| gvg^gp xcp^gcm g| gp
c v²tg^p ku0 | tkp^vg²udg r^rvgo c| kw o n³4 [0
00 E0 C0 gi {gu^ãv^ggn co gn{ v⁴dd j gn{gp v²v h^gpp
kn{gp kunqⁿnev²u n²tvgo. j qi { t^apm ku i qpf qn^a/
lpcm C| gu kn{gp vphqn{co o^at o gi ku p{kw
fg dk qp{ eucm c h^vcrqm l^atpcm gn c| ³4gi gm²v
j gvg^gp^ãn u|²i {g^rkm c vphqn{co qv n⁴vqi c^vpk0
C vphqn{co pcm o k^of³4u| g j wu| qp³4/ j cmi c^vlc
xcp. fg H^gj²t v^u| v^ggp^f ^ãt. cnk g| gndgp c fqri
i qndcp gt ugp v^gx²ngp{ngf km ^ãi { tgo²rk j qi {
ukng^t ^ãpk hqi j cto k^e³4tg h^rkl^opk c vcpw^am u|^a/
o^av0

ô O quv Y k^opk^r gi dgp u| gtg^v2^{pm} wi {cp^g| v
o gi euk^arp^k vⁿp o²i qw pci {qdd gtgfo²p{v
ku rj g^vg^g gr²tpk0 O k^of^g| pci {qp u|²r. fg kn{gp
o>fq^p pgo wf w^gm gr^lw^gpk c hto qn^ki 0 Pci {qp
pci { u| g^tg^r x^at g| gp c v²tg^p ku c| kw o n³4
rcrⁿi tc²u c o k^of^lknⁿdd u|²r gp fqri q| » u| qek^a/
rku p x²tgntg. cnkm kw ki c|^ap o ku| k^ou v^gx²ngp{/
u²i gv h^glv^ggm nk²u c o ci {ctⁿ^ai j^an^la^v o^atku
nk^x^vm

ô C| v j qi { j^ap{ o ci {ct²n M^opc^f^adcp. pc/

i {qp pgi² | o gi^a mcr[¶]cpk o gtv c ucw^{ku} v^{kn}ck cfc/
 vqm gl gp c v²tgp pci {qp o gi d[¶] j c v^crcpqn⁰ Gddgp
 c | ²xdgp nk^{3/4}v ^{3/4}gl gt o ci {ct. c ngi v³/ddl²v ²p
 pgo ku n[¶]qo. ngi hgrlgdd cmqt. jc xcrcok dcl xcp
 c | ^Àngx²ngn fg gl v ku c ngi v³/ddgp rqu^vp kp^v/
 | km gr⁰

ô C xku^u cx^a pfqtⁿu pgo ^{3/4}v^{3/4} nqo qn^cdd
 o²t^vngv⁰ C | qm cnkm x²i ngi ngv^{3/4}v^{gm} ²u jc p^a/
 rco lgrgpvngl vgm o²tu²ngiv xku^u cwc[|] a u# lgi {gv
 ner vcn⁰kl gp gddgp c | ²xdgp jcto kpe^{3/4}vngj gvgw⁰

ô O kpf gpgugt^g lgrngo | . jqi { gl gnp^{gm} c
 hgrg qn^ccp ltkuu dgx^a pfqtⁿ. cnkm gddgp c | ²xdgp
 l^{3/4}v^{gm} nk⁰ G | gm c | v jkw²m jqi { gl vglgr^o ² || gn
 hqn^c » qtu^a i. cjqn o kpf gpnk o gi ²ij gv²ug n³pp{
²u n³p {gm gu⁰ Eucn^vcm o gpgm^Àppgm xku^u c⁰ G |
 qn^ccp. o kp^v c j^adqt^À C vgrlgusp nk^hqt^cv^{rc}p ic | /
 fc^u i k xku^u qp {qm o kw. c | grj gr^g | ngf²u pgo xc/
 rco k n³pp{ ⁰ Gddgp c jctedcp xcp^{pc}m qn^ccpqm
 cnkm i | | pgm gl gngv ²p pgo n[¶]qo. ngi hgrlgdd
 cmqt. jc j q | | ^avctv | » km nk^j q | cvⁿtⁿ » n xcp u | » ⁰
 J q | | ^ao kpn[¶]dd c ugdgu^Àngm l³ppgm⁰ G | gm n³4 ^Àn
 uqnp^{cm} c ugdgu^Àug n³pp{ . nku ugi [¶]u²i ign l[»] /
 kpf wcv^À v^o qi cv^ucn o gi xcp qrx^c rtq/
 di²o^a lwn⁼ c jcn[¶]qucp u²t^Àngngv xku^u c ngm
 xkppk jqi { ^Àtc qvj qp ki { gm | | gpgm vcr^{tc} /
^a m^{pl}0

ô Gppgm c | qtu^a i p^{cm} rtqdi²o^a l^av n³pp{
 o gi lgr^{3/4}pk co gn^c gi { ^Àwcn c. dgx^a pfqtⁿ ²ngv
 jcn[¶] n³tf²ug ku⁰ C v²n pci {qp uqⁿki vctv. c o gl /
 ic | fc^u i k o wp^{nc}. eucm^a rtkku n³4 gr²p ng^l f fjg/
 vkm o gi ⁰ Gmqt c xgv²utg ngm c | go dgt⁰ Co knqt
 gppgm x²i g⁰ qn^ccp u^l ^Àpgv n³4 gvngl km co knqt
 o kpf gpnk^{pgm} c n³u^l d n ngm ²rp⁰ Cwi wu^l wu n³4
 | gr²p ^Àtc ngtgugw xcrcok c o wpⁿun[¶] | . u v gm/
 nqt cpp { k^c ngm * jqi { o kpf gp r²p | v o gi cf^{pc}m
²tv⁰fg c | v³p o gi kpv^l ³p c uci p^a ek[»] ⁰

ô Pnggo c| c rtk^av o gi i { | f²ugo . jqi {
 uqmnēn ngxgugdd go dgtgn o gi ngj gvpq qfcpk c
 o wpne n²tf²ugk. jc kw dgpp c| qtu^ai dcp k{gp
 vnk²vgvdp lqdd xqpc c| qti cpk^aek⁰ O²i ngi/
 pci {qdd o wpne kf gl²p ku eucxctqi pcm kf g/qf c
 go dgtgm o gtv qn{cp jgn{tg k^ap{¶qw²m ngv.
 cjqn o^at uqm c o wpnēgt 0 C ic|fcu^aik ²ngvdp
 c|qpdcq qn{cp pci { c| qr²ko k⁰o wu. jqi { kw gttg
 ugnk ugo i qpf qn0 Gi {gn tg j q| |^am c dgx^apf qtn»/
 nev. o k²vj c gl c| qtu^ai o k²fgpnk u^ao^atc dk/
 vqu o gi ²ng²uv wfpc cfpk0 C| qtu^ai ic|fcu^aik
 u|gtxgk pgo fqni q|^am o²i hgn c|v c pci {u^ao²À
 o wpnēgt v. co k kf g dgw^af wwx. O k²fgpnk gn w
 Co gtnē. h²p{gu r²rf^alc ngdgi. cjqn c| ²ngv
 v²p{ngi o gi j q| v c n²kdqpcnq|^auv fg kw pgo
 u^ao qpcmc| ²i / j clrc²kxku| qp{qm m²nd²du²i ²xgr0

ô Gddgp c pci { rtqdr²o^adcp n²ek jgn{
 lwqw pgn²pm ku0 Pgo uqnev qu| wpm pgo uqnev
 u|qt| wpm fg c o ci {ctqm u|go rqp^ad»n o²i ku
 eucm c ucl^av uqtuwpm c ngi hqpvucdd. vgj^av pgo
 o k²fgi { . jqi { c dgx^apf qtr^au u|cd^an{q|^auc o k/
 n{gp k^ap{dcp f n gn Mcpcf c ô o^at v²/ddu|³/₄
 x^anq|vcqw ô vgr²¶²uk r qnk^al^ap0 Gi {gn tg c|
 c o gi qf^au ngtgn²gw hgn² jqi { gl c pci { cf/
 o k²ku| v^aek⁰ pgo h²t dng c| ^amco o n²/²uk n²/₄
 t²dg. c dgx^apf qtr^au eucm c wcl^au/ ²u xcu²vk v^at/
 uc^ai qnpcm Æ ngv. vgj^av xgi {²m^av gl gp c v²tgp c
 vtj gngv0 Oc c dgx^apf qtr^auk Æ {gnlgp c n²v
 xcu²tu^ai. c Ecpcf kcp Pcvkqpcn Tck²yc|u
 *c| ^amco k xcuwcm²u c Ecpcf kcp Rck²le Tck²/
 yc|u. o ci c c| ^amco 0 G|gnpgm c| c| Æ ngv. jqi {
 l³/lpgm c dgx^apf qtn»m cnkm l³/ppgm ku c h²/f
 o k²gp t²u²d n ngi ngxgugddgp c| cpi qnm
 j qnw qw ku o^au²m k²ek⁰ o wpnēp²m²rk xcp0 G|
 o gi { gi { kf gli ²u xci { hgn wf^alc gl v c pci {
 go dgtcp{ci qv fqni q| pk c n²/i c|fcu^ai. xci { rg/

fki nʒu dd u o clf o^au dgx^a pf qtrʒ uk r qrkknʒ tc
 vʒ tpgm^a v0

Gpp{kv o qpfqw c o ci {ct h nup|vn cnk xcn}/
 dcp d^ao wvqu i {qtucp nkkuo gtvg o ci^av c| kwgpk
 xku| qp{qndcp0

G| gm nʒ4 3/4v c nk pgo c rcmwv xku| qp{qm nʒ4 3/4v
 xgti f km c o guu| g²u| cntc xgv f³/4v o ci {ct. pgnk
 o ci^a pcm ngm o gi vcf rpk c| grj gr| g| f²uv. o gtv
 mʒv/pdgp gr wu| wv000

C| ctc{^au»m²u c| g| gt u| ki gveuf^a u
 dktqf cm^a dcp

*Y kppk gi. *v 0*

O kpf gp gug kpf wn c xqpev O qpv tgc r d»n P {w/
 i ctc0 Ugnk ugo vctvc u| Am²i gupgm o gi o qp/
 fcpk jqi { j qx^a wc| km eucm qf cxgvk jqi { P {w/
 i ctc. o kpv c c| o kpf gi { xqpc000 C| kwgplgm
 u| go²dgp ¶| { ku xcp0 P {wi cvqp vgtgo c dA c.
 P {wi cvqp xcp c| ctc{. c| g| Av²u o kpf gplʒ ng
 nkpeugm co gn| gnd n fqnʒ t rgu|²u co kv c| wʒ p
 Mergv p krkn gmʒ4ngpk cj qn o kpf gp² rkg| gvgv
 o gi vcf rj cvu| 000

Mergv xcn»dcp vʒ pf³/nʒ4n ku²u co kpv gug c
 xqpev nkukmkm c lʒ p{ n x^atqud»n eucm o²i gi {
 kf gi xkdt^a pcm c xkrcp{ nʒ4v m c| wʒ p ut uʒ4
 vʒ vʒ i dqtwt^a pm o kpv c g| u| ko d»nwo rpppg0

C pci { uʒ4²u²i dg hA²lc dgrg o ci^av c| gz/
 rtguu|. co gn| c| gi {km »eg^apv nʒ4k 3/4u| g c o^a ukn/
 nen eucnpgo gi {gpgu xqpc r dcp0 O kpv j c c| gi {g/
 fA²k mwnA²c c xqpev rpppg0 Eucm c| c| gwt»rck
 wf lc ki c|^a dcp hgrhqi pk c| v c t²i k ki c| u^ai qv jqi {
 wc| pk eucm Co gtnʒ dcp wf pcm cnk kn| gp j quu| A
 A²c x^a ncmq| kn0 C o k gzrtguu| gkngp ku xcp nʒ/
 p{grgo. fg c| go dgtv o²i ku eucm gi { j gn| j g| nʒ4

km dg^atl^am c h^ãm[?]dg²u Ìi { ²t|k o ci^av. o k^pvj c
 d^{3/4}v^{3/4}pdg euwm[?]m xqpc0 K^v c u|cdcf o q|i^autc
 hmgvkm c hu^ãn{0 Cpp{k^v o q|qi. u|crfi^an c|
 go dgt. o k^pvc pgo ku c tqdqi » xqpcvq^p ngppg.
 jcpgo u|k^ttf h^{3/4}f^{3/4} u²v[?]pc0 C| ^ai{cm ugo
 qn{cp ngungp{gm o k^pv qf c|c|c0 Cj qi { c pci {
 »eg^apl^at»m w^rcf qpn[?]rrgp k^orqp^an» Ìu| » u|^amq/
 f^am Ìi { c pci { xcuwcmo q|i » j qvgrmgvgn0

O k^pf gppgm c v^gvlg c|qpdcp. co gn{gv o quv c|
^ancok xcuwcm eul^an0 C Ecpf kcp Pcvqpcn
 Tck^vc|u xqpc^vp wc|wo ²u n[?]u ²lu|cn[?]ki u|»v
 c t^afl0 Jcni cwm c rqr^au o w|uk[?]v ²u eucm
 c|²tv pgo v[?]peqⁿwpm ogtv p m pgo ki gp wc|/
 vcmxgn[?]pn0

Tgi ign co knqt nk^p{kqwwm c u|go Ìpⁿgv. o^at
 Qpvtl[?]dcp xqnwⁿpn0 G| c| c xlf²m co gn{ o k^p/
 fgp dgx^apfqtⁿv xku|ctku|v cw>n jqi { P{w/
 i k^vtc o gplgp ²u jc glgp c jgn{gp dgu[?]rk^mrg.
 jqi { vx^add wc||qp. u|[?]k^gugp gn[?]ci {lc c xcu/
 wc0 Vwku^vpcm c| gn[?]k r k^rpcv[?]tc pgo qn{cp
 ngngogwgp c n[?]w^ap{. Crceup{ fgo dqm co gn{gv
 kw/qw u|kn[?]u xlf²m u|cn[?]v o gi0 O k^pf gp Ìw hgp{ .
 co [?]i x²i p²m[?]n tqj cppcm uqm|qt »t^am jqu[?]a p
^av o k^pf gp o gi u|cn[?]v u p²m[?]n0 C| v[?]p nk^gu vxcm
 n[?]kgvng|pgn0 O k^pf gi { km n[?]4 gr²p n[?]v j^atqo u|k/
 igv xcrcogpp{k v^grg h[?]xcr0 Uqm|qt c| c| k^o/
 rtguu|k. jqi { c h[?]mc x[?]d ngo gm[?]fvgnk0

Gi { kf gki ²rxg|gvgn u|go n[?]rk c| go dgt. fg
 c|v[?]p dgr[?]h[?]tcf0 Gi { gi²u| pcr ki o^auv ugo n[?]v
 c| go dgt. eucm g|v c xlf²ngv0 L>d>n ku o gi^atv c
 uqm-j^avo²i c uqm| kn[?]d>n²u hgp{ t^gpi gv[?]id r0

M[?]u dd c|w[?]p c|v ku ²u|tgxgu|k o k^pf gpnk
 jqi { o gpp{k kw c dgvi hc0 Pci {qp uqm qw jg/
 xgt c| Ìu|²ngp. qn{cp. o k^pvc ^{3/4}ngv|gt gp nk/
 f^{3/4}p^{3/4}vg xqpc ngv xcrcnk0 C|v o qpf l^am jqi { c
 h[?]m ugo d[?]l^am nk kw uqn[?]ki. u v jc c| go dgt pc/

i { » p pgnkf n c ngi pci { qdd hgp { v ku hndqt v
j cdc gl gp c xkf² npp0 P go ku ngj gv n¹ vpk pci { qdd
2 u^{3/4} gi gdd l¹ n v0

C o ci { ct go dgt u | go g kpn¹ dd c u¹ n¹ i qv
u | gtgk pgo wf^{3/4} Apk gppgm c nkvgvpu² i pgn0
Fg pgo ku ngj gv0 Eucm n¹ u dd wf lc o gi c | go /
dgt. j qi { gddgp c | qtu^a i dcp o kpf gp pci { dcp
o gi { 0 C nkvgv xkf² m w¹ p. co gn { m¹ n¹ pdgp vrg
xcp o kpf gp ft^a ic nkpeugn ctcpp { cn gl¹ Awgn
u² ppgn qmllcn n¹ xgvngl km c pci { c n¹ / f. co gn {
wi { cp¹ i { p { À w } km c j quu À x² i vrgpu² i ki 0
co¹ i c Eugpf gu » eg^a pp^a n c Tqgnkgu / m pgkp
u | cn¹ m^a m o gi 0 Qw c | w¹ p c jxcuqm xkf^a ic x^a nlc
hgn o gi kp v o^a u v¹ l² m fg kuo² v ko r qp^a n o² t² n¹
dgp0

Gi { vrgu per ki wi { cpc | c j cpi wcv0 Gi { km
hcnw c o^a ukm o gmgw v plm gn o gmgw¹ pm j^a | cnv
o² i nkxg gv¹ pm c hgp { m^a tp² n¹ dcp. fg go dgt /
tgn cki vcf m¹ | wpn0 Mk wf lc. j qn xcpcm o gu /
u | g dgp c | qtu^a i dngl² dgpA

Gi { km / o^a ukm nku^a nqo^a u pngx kuo gt upgm
v pln0 i { Eqdcnv pgx² v o^a t uqmu | qt j cmvwn0
J cmvcpwn i c | fci gl¹ Avd^a p^a m xqncm gttghr¹.
co gn { gm kf g eu^a d¹ qv^a m c xkf^a i o kpf gp t² u² d n
c u | gtgpeugxf^a u qnev0 O² i o c ku² n¹ pm vrgv. fg
c | gl¹ Avu cm qm qn { cp gi { u | gt gm o kpvj c n¹ / 3 / p /
u² i gu x¹ ko cm qmrgpp² pgn0

P go ku qn { cp t² i gp c | c j¹ u | cnfv u | gtvg c
xkf^a i dcp. j qi { J wf uqp n¹ / 4 gr¹ dgp x^a tcvcpwn
i c | fci ctcpgtgntg dwncpvcn0 Cnmt o² i gl c
j gn { ki c^a p nku hcnw xqnv. co gn { gv upnk ugo xgv
nqo qn { cp0 K gp uqmu | qt gttghr¹ gi { / gi {^a nqo^a u
pgo v¹ / dd. o kpv n¹ v j^a tqo nku xkm² u c | | cn x² i go
O gi eup^a n^a m c |^a nqo^a uv c | | cn c i qpf qrcwn
j qi { j c xcp^a nqo^a u. o clf l³ / ppgm c | go dgtgm² u
c n¹ / 4 p² m hgn f² upgm kpf vn j ku | gp qn { cp qtu^a i /

dcp xci {wpm co gn{ o quv ul \tilde{A} ngvkn0 ¶ { xqrv J wf /
uqppcn ku. co gn{pgm c n³4p{²ng pci {cp hguv k0
I {³4p{³4 v» o kpf l^atv c| ^amjo ^aup^an nkgu ul ki g/
vgmgn f \hat{A} u xgi gv^aek>xcr0

C vgo ²ul gv k ul ²ru²i gntg c| qpdc pgo uqnev
cf pcm gttghr² c| go dgtgn0 G| ²tv o ²i ²xvk gf g/
nki qn{cp grj ci {cvqw o ctfj cvqw xqrpc c J wf /
uqp. o kv co kn{gp ng| fgvdgp xqn0 C| ctep{ c| qp/
dcp gi {km pcr>n c o ^aukntc o kpf gpv o gi x^anq| /
vcvq0 C l³4f d n nkp wgm c j^a| cm gi {km \tilde{A} rgv c
o ^aukm w^ap p{ kqwc o gi c ner vk0 C| ^amjo ^auqp
o ^at qw xcp c vqtqpwk dcpm h>nlc ku0 Qn{cp ²r²pm
²u grxgp c| ²rv. co kn{ gptg ugnkugo ul ^ao ¶|qv0

C d^ap{^am plpeugpgm c| ^amjo ^au n³4 gr²dgp. j c /
pgo cw>n n³4 \tilde{A} rdgn \tilde{A} n j gwgp o ²tl³4f p{ k g0 C v /
xqp ngtgul \tilde{A} n o qvqteu>pcnqm ul ^an¶|cpcm u v qw
r kj gp c v» xk²p c| cgtqr n²p ku. co gn{pgm c| c
hgrfcv. j qi { c pgi {xgp³4v o ²tl³4f p{ k g hgm
Tgf Ncn²j q| *X³4³4u v+ ul ^an¶|uc c| ctep{^au>nev0
C| ctep{^au>m gttghr² pgo gm ctfv go dgtgm o c
o ^at pgo i {crji v³4vpgm c nkpeugu l³4f hr².
j cpgo hnj cu| p^an^am c o qf gtp vej pkn²pcm o kp /
f gp gul n³4²vcttc. j qi { e²rlwnevgr²tl²n0

Ref ki c rgi v³4dlg pgo ku o ck rgi ²p{. j cpgo
o ^at qw xqrv Mqpf kn²p²n ku. co knqt c| gru
ctep{tc t^acnfvcn0 C| ctep{ pgo rgi {gm g|
ko ^af> kpcn0 G| gm c| go dgtgm grxgul pgm o kpf gp
o ^au o wpnc ul ^ao ^atc0 Co kv ngtgugm ²u co k o gi /
o ctfv c| ctep{^au^aud>n cdd>n ²ipgm vx^add ²u
o kpf ki c j ¶|gntg x^atpcn0 C| v rgukm o knqt ²tng| km
xcr: j qppcp c| c l» \hat{A} u^ai. j qi { c l³4f \hat{A} tc gr /
^atwnc vkn²v ²u c vgo ²ul gv o gi o wcvc xcr: j qn
j qi { dngul²dgp. j qn tglvi gv k c o kpf gp d^ark^ap{qm
d^ark^ap{^av c| ctep{cv0

Co kv j ¶|g vtlgf v c j wf uqpk rgrvpgm o gi /
lgrvpgm kuo gtv hnu| gtgr²ugkmgr0 J ^avk^ammen

u⁴ qtfctcdqmen² u v⁴ddgp gi {^Åw pgnk x^a i vcm c
 dk qp {vcrppcn⁰ C | »c o^a t x² i rgi gupg Mpcf^a /
 j q | nercuqnfvcn⁰ G | c u^a o wntc c | kuogtgvrgp
 xk^a i. co gn { vrg xcp *nercpffc n tgo² pp {gn
² u c dqrfqi w^a u rgi gv u² i² xgr⁰ C | v o ci {ct^a | |^a m
 j qi { eucm o gi ngn nerc tpc c h⁴ f gv. o^a tku hgn/
 dwmep c n⁴peu⁰ Xcp ku dgppg xcro k⁰ C | dk q/
 p {qu. j qi { c h⁴ f pgm vcr^a p o² i gi { t² u | g ugo
 cpp {k^c kuogtgvrgp² u nkdqi q | cvcp. o kv g | 0
 —lccdep ku² v ctep {tc cnrfvc m o² i r g f ki Y kp/
 plr gi n⁴ gr⁴ dgp. c Tleg Neng n⁴ p {² n⁴ p. cj qn
 c | »c o^a t ku² v t gpi gv gi gp v^a t¹ a m i {³ /^a t k m c
 h⁴ f gv

J c eucm tqo cpvkn^a t c xcp u | ^Å n² i. cnrf c |
 kv d xgp gr^a i 0 C | go dgtgm n⁴ r | grg² v pci {qp k /
 i cv^a m c | kpf^k p qn⁰ O c o^a t pkpeugpgm jctekcu
 v⁴ | ugm c t² i k xk^a i vgrlgugp gn pv⁰ O² i v⁴ n⁴ r gv /
 ugddgp o gi ugo o ku^Å pg o kpf gp. j c c nercpck
 n⁴ t o^a p { c | Gi {gu^Å / f nro qm o kv¹ a t c pgo
 x² f gp² c | grcmⁿ v⁰ Mku | cn⁴ v u^a o wntc pci { vg/
 t^Å gvngv. ^Å i {pgxg | gw ëTgugtxcv⁴ q^a pⁱ / qnc⁰. cj qn
 o^a uqmpgo rⁿ j cvpcn⁰

Kv² rpgm² u² a dt^a pf q | pcm c o ^Å n² » n co gn {
 o^a t uqj cugo v² t xku | c⁰ J cr^a u | cvdⁿ gtf kt^v udⁿ
 vct^a m gn o ci wnev c nku hcmwp {j » n dcp. u v u^a v⁴
 tcn⁴ dcp rⁿ pncn⁰ Mko gppgm c j gi {gn⁴ g. xcf^a u | pcm
² u eucr^f a xcn hqil^a m c xcf cv. co gn {pgm rt² o l² v
 c | w^a p² t² v ngu⁴ kn⁰ J wvgt² u Ht g f c xk^f 2 n⁴ p o² i
 c xcu^Å o gn⁴ w ku n⁴ vpk ngv. o kv j c nk^a n⁴ v⁴ upcm
 o c tcf vcmxqpc o gi 0

C x^a tqudcp ku cnrf gr^a i 0 Tgpf gupg eu³ / pf gupg
^Å pgm gttgher² vto² u | gvugp ugnk ug d^a o wntc o gi
 ngv. o gtv o kpf gppcr k | c n⁴ v^a p { 0 Xgn^Å pm ku wc/
 | qw c jcl⁴ p n⁴ v kpf^k p v⁴ | uh. cnkm Nqpf qdcp
 l^a tvcm² u x² tvguw² t gkm xk^a u ^Å i {gkv kv² | v² m gn c |
 cpi qn nk^a n⁴ cn rgi cr^a dd c | v o qpf v⁴ n⁰ Dk qp {qu

j cv^a tnki c | ¶^a ut » n xqrv u | » ²u c | grkp^v | ²uugn krgwg
 ¶^a ²tgvmmgn pci {qp o gi xqncm grⁱ gf xg0 Xcu^a tpcr
 hgrⁱ ¶^a ²m vqncu hgf ¶^a | gkngv. c jcl » p wc | » o c /
 i {ctqmpci { o wcv^a i^a tc0

C uqm u | ²r xlf² m n¹ ¶^a ³w o ²i ku cncf qn {cp xc /
 rco k co kv rgi u | gddp gm nk^a nqwc m nk0 G | O kpcnk
 c vxcem i { ¶^a | {g. c ncpfc ckm n¹ gf xgpe h¹ f /
 vgrg g0 O qf gtp ¶^a ¶^a j gn { . xk^a i h¹ f pgm dgk^a nk0
 C ncpfc ckm uqj cugo c lgrptg. jcpgo o kpf ki c
 l³ x tg i qpf qpcn0 P go ¶^a | { tgp f g | ^v m dg. cj qi { cp
 Mcpcf c o ck j gn | gvg o gi gpi gf p². jcpgo ¶^a | .
 cj qi { cp o clf c l³ x Mcpcf^a lc u | gtgp² 0 Rqo r^a u
 u^a n¹ f^a m co gn { gm o ²i c rgi n¹ p { gugd ¶^a | r¹ uv ku
 n¹ grⁱ ¶^a nk0 P ci { u | gt p { ctcn^a m co gn { gmp² n r c | c /
 teddevcki r¹ j gv gm¹ r | grp0

Kv ng | f fpgm c | gtf gk vxcem co gn { gm r¹ j ¶^a » f /
 pcm gi ² u | gp c | ^a nco qnki 0 C vxcn^v hq¹ { co qm¹ n
 eucvq^a m¹ n n¹ ¶^a ³w ³u | g ² u ¶^a | { euq^a u xk^a i qv
 vtgo vgw¹ 0 f n¹ o xk^a i r¹ v¹ u ¶^a . c | g | gt u | ki gv euq /
 f^a u dktqf c¹ o c. cj qn c pci { qp i c | f ci qm n¹ n¹ go g /
 ugp gr | » tcn¹ | j cvpc m ² u i { ¶^a | { ¶^a n¹ ¶^a j gvgm c vgt /
 o ² u | gv u | gu² n¹ gu l^a ^v n¹ kdcp0 Vgto ² u | gv gup c o q /
 f gtp ur qtvo kpf gp^a i c n¹ r xkug¹ xcp0

Mcpcf c o gi rgr gv² ugm qtu^a i c0 O kw^a p n¹ v
 pcr ki u | » tcn¹ | vcvw. o clf wpcvq^w c u | km¹ u hgp { /
 xgugmgn gi { u | gttg. o k¹ vgi { rctcpeu | » t. Y kppk /
 r gi gn w x² i ² v u | c n¹ | c gppgm c x² i p² m¹ k xk^a i /
 pcn0 Qpvtk¹ m¹ ¶^a ³u xk^a i c o quv o^a t eucm go r¹ m
 t^a u | c rcf wpm O cpkqdc x² i vgrp u¹ m¹ i^a tc. co gn {
 j^a tqo vctvqo^a p { qp^a v o wcv wi { cpqn { cp gi { /
 j cpi ¶^a n¹ r gv. o k¹ v co k¹ gp c | g f f ki k xqn0 C m¹ ¶^a
 n¹ p du² i o k¹ f ³u | g cpp { k j qi { c j gi { gm j gn² v
 dgr¹ v j c v w p u¹ m¹ i h¹ j n¹ rlc gn c hgp { m j gn { gw
 k¹ » | cvqu nkgt l g² u d ¶^a | cv^a d¹ n0

Dgpp xci { wpm cddcp c xk^a i dcp. cj qn c j ¶^a gu
 ce² n¹ u d ¶^a | c vgtgo 0 Kv / qw o ² i u | | h¹ f gm c xcu Av

o gpv²p ku fg c rgi v³dd j gn{gp o^at j »f¹kw c|
go dgtken²tcv0

IPn²a ki tqj cp c xqpev c| À xk¹i dcp. co knqt
dghw P {wi cv wrclfpn²r r r gpk h x^atqu^adc. Y kppk/
rgi dg. co gn{ n²r xkugrk cfo kpk| v^adc. u| gtxg| k g| v
c m²Á²p³u À xk¹i qv0

Y kppkr gi c P {wi cvner wlc

Y kppkr gi c P {wi cv ner wlc0 C| kf gxc²ukm
o qpf¹a m j qi { c| c j cvm cu h²4f vt²Ágv. co gn{gp
x²i ki u|^a i wf qwpm² u cj qn p¹peu o^au. o kpv
u| kmc o gi c hgp{ m x²i g¹ v j cv²cp uqtq| cv.
rgi hgtgdd eucm kw¹qw crt» vxceun¹m lqddcp gn/
x^arcu| dc c Mergv² P {wi cv²n o kpv c| Cv²cpk/
»eg^ap c t²ik² u c| À xk¹i qv0 C o^aukm qrf cm²p.
Mergv² o²i pgo c²rcmw nk v²rk²ucp Mcpfc0
C| c v¹rcu|^a uk rqp¹dc c t²ik² u c| À xk¹i go/
dgtg¹pgm gi { vit^a u c| Gi {gu²Á²f n²o qm²n pgo
ku cpp{kc cv²n o kpv kpn¹dd P gy {qtm²n
co gn{pgm nko qpf qwcp nq| o qr qrkc lgn¹gi g grku/
o gtv² u gppgm j cv¹uc o guu| g xk²ngntg pgo o c/
tcf j cv gn0 K²g^av g| o^at c| ki c| k Mcpfc. c
rtcklg/vctv¹o^a p{qm cj qn o kpf gp c d²Á^ad²n² u c
d²Á^a2²tvxcp0

Y kppkr gi pgm o²i o c ku crki cnef gi {/
pgi {gfo k¹rk² r²cnq¹uc. o²i ku v³ddgv go rgi vkm c|
gi²u| xk¹i qp. o kpv c pci { xk¹i x^atqu¹ncv0 C
i cdqpcv| uf²lg² r r gp qn{cp h¹pvqu. o kpv Ej k¹eci »/
pcn0 Gw²»r^a dcp² r r gp qn{cp h¹i {grgo o gn nku²tkm
^atckv. o kpv c v³ddk xk¹i t²u| gndgp0 Gw n h¹Á¹i.
j qi { ft^aic ngu| g c n²gp²t. j ku| gp o c o^at Mc/
pcf^a pcm rtcklg/vctv¹o^a p{ck h²gm¹Á²f³4²m o ci w
nev c xk¹i rgi pci {qdd i cdqpcv²to gi {u²i²x²0
G|²tvwf pcmf km¹ r pko kpf gpn¹gn0

C x^atqup o gi r¹u| km jqi { o²i hcvn²u cp/
 pcm c pci { cih³/4fpgm c u²r¹p go gmgf km co g/
 n{gv u| go pgo r¹vj cv dg0 J cvm cu. u²rgu wee^am
 cjqn xcp jgn{g c r¹xgi pgn0 Rtcmlmw co gtnk
 tgpu|gt j^a|cm o qf gtp n¹p{grgo²u o^at ugo o k
 ukpeu. co k Gwt^atc go r¹ng| v¹vg0 Kw p{wi qf vcp
 j^a|jcv^apcm c|²i dg h¹gj n¹eteq^an¹ev. fg pl¹peu
 u|^am²i t^a. o gtv xcp gr¹i jgn{. c x^atqu v¹tlgu/
 ngfj gkm ngf xg u| gtpv0 G²tv Ai { r¹u| km o k¹vj c
 c r¹i v³/4d pci {²r¹g¹vgv j k¹vg¹gp cddcj ci {v¹m
 xqpc0 O kpf gp cnef^an{ p²m^an vj g¹v²pgm t^a o²i
 gi {r^at go gr¹vgv. Ai { ku tgpfdgp r¹ppg0

C x^atqu xc¹xj qi { Ai { p{^al¹v¹| km o k¹v Dwf c/
 rgu0 C Tgf Tlxgt *c X³/⁴u hqn{co + gi {km qrf c/
 r¹p U0 Dqpk¹e x^atquc. qn{cp o k¹v c o k³/⁴gi
 Dwf^apm²u c d¹gn^am h¹u| ng c o c ic g¹o ctf qw^a/
 i^adcp²rrgp Ai { euqf^am¹| km Y kppk¹gi i {qtu
 hln f²u²p. o k¹v cj qi { c|³/⁴gi d¹wf ckm pgo²t/
 v¹w²m o gi c h¹ku Rguv pci { pgnk¹gp¹ ^ar¹u²v0 Vc/
 r¹p eucm c| c m^an¹pdu²i. jqi { kw gi { o^aukm hq/
 n{co ku xcp. c| Cu¹kpgcdqk. co gn{ kw u| cnef dg
 c pci { hqn{»dc0 Co knqt c| gnu go dgt o gi lg/
 r¹gv gl gp c v¹lqp. o qeu^at xqrv o k¹pf gph¹r¹. c| »v
 tgpfdgu| gf vgm o k¹pf gpv. o²i c hqn{co qnev ku0 C
 o qeu^atpcm o^at ug j¹g. ug jco xc. pgo o ctf v
 o gi dgn ng o^au. o k¹v eucm c x^atqu p¹gxg. co gn{
 k¹pf k¹pwnku| crqu xk| gv lgrgp0

M¹v²xxgn gl gn w ^appgr gn²m gl gngv c t²ik
 kf n¹g0 Cmqt xqrv c x^atqu 72 gu| v¹gp u0 Cppcm/
 kfg²p eucm 492 go dgt r¹| gpi gw gl gp c xk¹ngp0
 C| »eunc tqul h¹j^a| cnev x^atqupcm eu^ah¹qpk pgo
 ngj g¹gw. c|²u| cm xcf r¹t²o lgkv kw i { l¹v³/4m³/₄ /
 u| g. kppgp u^a n¹q¹w¹m ng c hqn{co qn¹yp c vxcm/
 j q|. Co gtn¹ dngl² dg0 C| »v c r¹t²o ngt gungf g/
 ngo kw o^at o^auqf uqtdc u| qtwn. c i cdqpc n¹xg/
 vng c o c ic lqi ck. c rku| gv. c xk¹i n¹gp{gt²v

cf o kpkul v^a rlc gl c pci { r^r vgmgn gn tg p{ct/
i cn> x^a tqu0

“ wgp ²x. pgo kf gi { x^a tqu v³/₄ v² pgv² dgp. fg
gl c| qtu^a i pci { qp jco ct ²n ogtv o kpf gpv gi {/
u| gttg gn cnet ²tpk0 O^a t xcp t² i k x^a tqu ²u À
x^a tqu. c| gi { kmpgm tgrtg| gp^v puc c Ockp Utggv.
fg c hqti cmqo o kpf kpn¹ dd c| À x^a tqu hgr² vq/
n> fkm ²u c Rqtvi g Cxgpwg jcvcm cu ²r Àrgvklxgn
pci { ^atwj^a | clxcn c| ki c| k xk¹ i x^a tquqm n^r r² v
ki { gm| km hgrxgppk0

C| kf gi gp. cnk kw gn u| ³/₄ o gi hqtf vn pgo ku
r¹ v ugo o k pci { | q^r uv dgppg. fg c jkf gi um> vqm
cnkm n¹ i pci { qdd v³/₄ o gi dgp vgrgf vgm ng. ²u c|
k rcpf kcm c wrcf qpnr^r r gpk ncpf ckm o ci vn
dcp nku² ng² | km gl v c pci { ki { gng| gvg0 K^v eucm
uqm r² p| v cnetpcm ngtgupk pci { xci { qp v i { l/
v² pk c| w^v p o clf c r² p| v gm¹ v² pk c v² p{ n¹ i gu
xk¹ i x^a tquqndcp0 G| c| qp dcp euw^a p vgtx o ctf.
o gpv c r² p| uqj cugo n¹ i { gm gl o gi tcdul qn^a k/
pcn0 C dqf qi w¹ uk n¹ i gv u² i gm gn n o² i cmqt
ugo u| qn¹ u nk² tpk j c o^a t dk qp{ qu gtgf o² p{ gm
xcp² cmc| go dgt o ³/₄ ³/₄ 0

Gppgm c hgrh¹ i^a upcm n¹ i gv wrcf qp¹ cpk
j qi { c nww¹ c pci { kp^v | o² p{ gk o² i pgo wf/
vcm cnr qucdcp i { ³/₄ ngtgv xgtpk0 Pci { u| p¹ j^a | c/
nev qrgt^a nev pgo wf gl c hcvn x^a tqu gn
vtv² pk fg gr³/₄ p o² i ô o² i r g f ki pci { qp j c/
o ct ô c p p cmc| kf gl g ku0

G| c x^a tqu o gi gpi gf v² o^a t o ci^a pcm c| v c
nwvuv j qi { u| qekrku^v xgl gv u² i gv x^a nu| vqwo
Hcto gt r qn^a to guvgt c o w p n¹ ur^a t v j q| vctv| qw
²u ki { gng| gw ku u| qek^a rku cmq^v uqm vgt² p gtgf o² /
p{ gngv hgm wcvp0 Y kppk gi c| qp dcp pgo gr¹ i
³/₄ gi cttc. j qi { êk{ gpi r tqd¹ r^a m n dcln¹ f l² m
²u c| À r qn^a to guvgt. Y gdd. c h¹ n¹ dÀ gl tgf gu
gi² u| gp o^a u xk¹ gngp gxgl 0 Kc| k co g tk¹ ck cnk x^a /

tqu^a pcm o cpci gtg. qn{cp tgm^o o qv eucr pgnk
o kpyc gl²tv h^k gyp²n0 Mksn^onc ëc hgp{xgugnv n c
r^am^anki ì lgnl »v²u Co gtn^e i c| fci lckv c| cw»m
x²i vgrp vgi gt²p hgrj ¾ r ¾{¾ vgwg kf g0

Pci { ugi ¶u²i²tg xcp. jqi { kw o²i rñj gv kppk
2^u ul^atc| Co gtn^e gi { nku Æ Æ^ou²tv ul ¶xgugp kf g/
t^apf wf0 Mksn^oi ¶^am c x^atquv c o kpf kpn^odd pc/
i {qdd 2^u pci {qdd euqrqtvdncp 2^{tn}g| xgpf²i gm
vku vgrv²tg0 C x^atquj^a| c j qo nqn^op n^opi qn» dgm
Æ x^¾rk m c| 2^{tn}g| ngv0 Gi {^ancn^op pgo ul gtwkm c
u^¾u²i gv. Kv c xkn^oi qp c rñi qre»dd c xkn^op{ 2^u
wi {cpeucm pgo ur »tqpcm xgrg0

C| v o gi ngm ul qmpk Co gtn^odcp. vj^av Mpc/
f^adcp ku. jqi { c| ki c| k pgxg| gvu²i gm c ul^am/
f^am 2^u kw o kpf gp x^atqudcp hgn rñj gv o gppk gi {kn^o
pgm c vgw²tg. jqi { cppcm vtcul^at»n i {¾p{¾/
n¾ j guugpgmc x^atqu ko r qp^an» pci {u^ai^adcp0

Y kppk gi gttg c e²rtc c rñi lqdd0 Cn^ot perrcn
cn^ot 2^{ul}cn^e gi { nk^apf wf^ou c Hqtv I ctt{ vgw²tg
qn{cp 2^m2^p{. co gn^o o kpf ki o gi o ctcf go rñng| g/
v¶ndgp0 Perrcn c xk^ogm gl Æuv xqpcrc q`ul c ul²v
c x^atquv j^atqo t²ul tg0 C j^a|cm ul kpv^o dgrg xcp/
pcm^ai {c| xc c lf^om| ¾f nqo dlckdc0

C| Æ rñk 2^{rg}gv ul kv²p gr^ai^vm c| gn ngn gm
pgi {gf²v n cj qn c vkrnwu nēpcfck p{ctcn»m i {¾
p{¾ xkn^om ki c|^ap hguv k n^or gv p{Ævcn0
O kpf gi {kn j^a| ngtv n¾ gr²p rkj gp. ul kpv^o tqul
cttc i qpf qpk jqi { gi {ul gt eucm gr^¾p c v²n j wn
c j » 2^uo gi f gto gul vgl vc| kf knnwu. ul 2^r xkn^oi qv0

! lu^ocn^e o kpf gp tci {qi 2^u l^op{rk^o ! i pgm c
j cvm cu 2^r Ævgm r knqi » cdrcm| go gk c j cvn^o
o cu wcn^ov c n^or^am i {¾pi {h^o 2^{tg}k f ¶ul ¶km 2^u
c| 2^{ul}cn^od»n c| c j cv^otvēp pci { ¾¾ 2^u c|
2^{rg}vgm 2^{rk}g²ug tg| gi nk co gn^o c hcvn^oi qv
o kpf ki lgn^o| k0

Kv o²i xcp l¾f. j qnqw o^auww o^at pgo pc/

i {qp d xgp cnf0 C h3/4f c ngi pci {qdd dwukp guu0
 Vgrg ku xcp c x^atqu h3/4f Āi {p^{3/4}n^{3/4}mgn cnkm gi {/
 o^auv nek^an^am h3/4Ān c l» Āi ngvgn n¹p^an^au^adcp0 K^v
 c | go dgtgm o²i ēeuk^an^am c h3/4f gū. kv^am c |
 gtf ngv. v^{3/4}km c u | | v^crlv. o quv u | Āngvpgm c | Ā
 pci {dkv^aquqm fg gi {Āvcn c h3/4f tcdul qn^ak²u
 rtqrv^atlck ku0 Cnk^v ngj gv. dgeurpcem c h3/4ffgn fg
 g | Āi { xqrv. co k^vc c xk^ai²n uqnpem ukngtĀn fg
 o²i v^{3/4}dd m^acte i { Āngo rkmhgr0

Y kppk gi pgo eucm c o gi i c | fci qf qw h3/4f /
 ur gmw^a puqnev ku0 gtk jcpgo c h3/4f r^at^kkv ku0
 K^g 3/4p^k nk ngv c n²v xcu^āw^a tucu^ai r^an^cwf xcte.
 o kv^a cjqi { xcr^o knqt c | Gi {gu^āv^f n^oo qdc
 n¹l^atv²u gt ugp t^{3/4}w jcl» n¹p jql^vm c tcdul qn^a/
 i^anev0 Uqnep n^{3/4}Ā^{3/4}m gdd n c uqtd»n nkxgti fpk
 pgo wfpcn0 K^v pci {qp t^{3/4}k^f c o v^pnek^f 0 C |²x
 gi {/n²v j»pcr^la dcp ngtgupgm²u c | w^ap c x^atqu/
 dcp m^afqtqi pcn0 Eucm cpp {kdcp xcp m^āv^{3/4}du²i c
 t²ik²u c | Āi xk^ai n^{3/4}3/4w. jqi { cnkdgp xcp v^{3/4}jg/
 v^gv^gpnctcv²u gr^ai²ngro gu²i. c | nk wf p {q/
 o qt^āv^ai^ad»n ngt^āpk fg jc grt^p {gf. Āi { r w | /
 w^au c x²i g0

Y kppk gi c pci {qp i c | fci qm²u c pci {qp
 u | gi²p {gm x^atquc. cnkm c | qp dcp xcr^o gpp {k^gp
 o gi gi {g | pgm cddcp. jqi { eucm gi { gt v k^afpcm
 c hngv^g u | | h3/4f gv. gdd n uctlc f | km nk dqrfqi w
 n¹uwn²u c u | gtgpeu²vgpu²i Ān0

Cj qi { gi { qtu^a i qveuk^a n¹pcm

C dgx^apfqt^au n²tf²ug c ngi hqpvqucdd rtqdr²/
 o^alc gppgm c h^cvcn qtu^ai p¹cm cogⁿ pgo c lg/
 ngptg. jcpgo c l³x k^g tgp^fg ngf km dg0 G | c | qt/
 u^ai o²i p^kpeugg n²u | gp. fg c | cfo k^pku^a v^ael^olc
 o^at o gi xcp²u hqn^av^p h^gl^gu^a vⁿ0 C xcuwem c |

qtu^ai gi {km u²r²v n c o^aukri hwpem²u »eg^apq/
nev n³/4pgm³/4u|g0 O gi^ancr²q²w²m c rqp²qu o gpgv/
tgpfgv. co gn|gv cmtt ku dgvtcpem j c gi {gvrgp
gi { wcu ugo cnef0 Ugi qn pgo rgi gv qn|cp n²p|gr/
o gupg wc|pk o kpv kw0 Mgx²u c| go dgt c uqm
xcu²Aj q|0 C rgi²/4ld gugvdg c j qu| À Rwo cpqm/
dep crki r²|gpi gi {r^at wcu0

i { xcp gl m²/4pdgp o kpf gppgr0 Crki cnef
o²i j^atqo/p²i { ²r²Ágv. fg o^at qw xcp c k²p|g/
ugp dtgpgf|gw kunqnc. co gn{ x^atlc c vcpw»nev.
cnkm eucm gl w^ap hqi pcm u| Ágvp|0 C vcp²u kpi {g/
pgu. fg o²i i { ugo cnef gr²i lgrgpwrg| 0 C o c/
i cucdd kunq²nmen ug ur»tqpcn0 J c gi { ^amco dep
u| Ám²i rppg³/4 o ci cucdd hqm² kunq²tc. cmtt
²r²Ávgpm v²|gv²u o kpf gp²xdgp eucm c o^auqf knv
p{kl^amo gi. c²/4dlgm²Ávgup^ancpcn0

Cpp{k c| gi {gvgo²u vgor²mo. j qi { u|kpv gn
ugo rgi gv n²r|gpl0 Oc o²i pl²peu. cnk n²vq|cvc.
fg kw o kpf gpnk qr²wo kuv. o clf rgu| ô o qpf q/
i cv^an0 P gi {xgp/³4xgp j²k u^ao^atc c| gi {j^a|cm
u|²kugup²r²Ám|pgm ki c|. j qi { dk qp{qu^arf q|c/
vnev o gi n²/4vgvrgm c j²k nv n ku. o gtv wfxc/
rgx gp c| ^amco²u c xc²uk Ái {gm u²x^arcu|²uc
kwku vrgu. o kpv c| Gi {gu²Áv/f mco qndcp0

O kpf gphr² o gi eul^an^am c| wcnv. hqn|vp
²r²Ákm hlg²u|km ngv0 Oc o²i pgo pci { c hqt/
i cnqo telwm fg o clf rgu|. ô rgi c²dd gt ugo
d²|pcm dppg0 C rgi²/4ld xcu²Á²mo^auqp pl²peu
o^au. o kpv p²j^ap{ hc²r²Ágv. fg o^at qw xcp P {w/
i cvqp o kpf gp²Áw c| gr²x^avqt. cj qx^a dgxku km c
d²Á^av. p²j qn j²v p{qre ku cnef. cu|gtkpv j qi {
o gpp{ktg xcp u| Ám²i. xci { co gpp{ktg i qpf qn/
l^am j qi { o clf hgn fpk hqi c xk²n0 J c eucm j^a/
tqo j^a|km» ku d²Árcnqf km c xcu²Á²r²Ávgv o gmwv
c|²tv qw v²Á^an^am c u|^am>v ku0 Vgto²u|gvugp pgo
k²p|gu²r²Ávgm fg vku|²v²m²u gr²i n²p|gro gvgm

ugo o k gugtg ugo c o ck hqti cmqo tc dgtgpf g| xg0
 Kvo kpf ki ngj gvul qd^a vner pk0

G| v c| qtu^a i qv ³/₄pwf cvqucp ²r[¶]km ²u o ²i
 pgo wfl^a m nkp^g m c u^a o^a tcA C| go dgtgntg ²r/
 rgp qn{cp u| ²Am² i xcp. o kpv c j^a | cntc. c xcu^Δtc.
 c vgo r mjo qntc. wcntc. u v o ²i pci {qdd. o gtv
 g| gm p² m^Δ n ugo o k ugo ²t ugo o kv ugo 0 C| ^a mco
 c| gn w eucmⁱ cwc kfg c m^m n^v 0 Pgo eucm h³/₄ f gv
 cfqw pgnkm jcpgo o ²i hgn| gtr² uv ku0 Oc o^a t
 pkpeu qn{cp l» xk² i. krgwg cmnqt ugo xq^m o gtv
 kv c h³/₄ f gv ku o ci^a pcm c| go dgtpgm ngm o gi v/
 tgo vpk^g. o kpv o kpf gpv. co k c| qtu^a i ²ng^v j g|
 u| ²Am² i gu0 Gn dd nk ngm kvcpk c h² n^v. hgn ngm
³/₄ pkc h³/₄ f gv. o kgn wvgo gpkngj gn=tc|vc0

C h³/₄ f gm cmnqt o ²i pgo xq^m cm c xcu^Δ v o gp/
^v p. cj qppcp c| w³ p n³ pp{ wc| pk qn{cp jg/
 n{gmtg u^a n[¶] cpk cjqn c| ²t^v ngu[¶] ²u o kpf gp pg/
 j² | u² i p² m^Δ n o gi {0 Oc o^a t o kpf gp qn{cp h³/₄ f.
 co gn[¶] n³ gn xcp c| go dgtk ek^k k^a ek^j q|. dk qp{
 gn xcp hqi m^k c. u v ct^a p{ mⁱ qucp pci { ku c| ^a tc0
 O² i o c ku xppcm kpi {gp h³/₄ f gm ^Δ i {pgxg| gw
 j qo guwcf gm pci { o gpp{ k² i dgp. fg g| gn^g p c
 xk² ngngp j[¶] g ulpeu c xqpcvpcn0 Eucm o ci c c
 r wu| c h³/₄ f vgt^Δ n gn c dgx^a pf qtn» gr². c| v ngm o gi /
 o wⁿ i rj cv» ^a mcr qvdc j q| pk c| w³ p ctt» n i qp/
 f qunqf pk j qi { nⁱ {gp ku xcrco k ²t^v ngu[¶] gpk xc/
 n^l c ²u x² i ^Δ n c nⁱ pgj g| gdd h^g r f cv c vgo ²uv
 qn{cp jgn{tg grlwwcvpk cjqn cfpcm ku ²tv^g xcr/
 o k0 Pgo n³ pp{ x^a mcm^q |^a u0 J k^a dc cl^a pf² n^q | /
 |^a m kpi {gp c h³/₄ f gv. pgo kpi {gp h³/₄ f c|. qn{cp
 j k jgvwgp gt hgu[¶] ²uv ²u nkct^v uv n³ /^g vgn j qi {
 xgtgl^v mlgp ²u Gn[¶] pn[¶] f^a udc^p ²rrgp grⁱ gv h^k gvp^g m
²tv0

Kv c nⁱ pci {qdd ²t^v ng c| go dgtpgm c o wp/
 n¹ n² | pgm xcp0 G| c| qtu^a i c| qpdc^p o kpf gp ²x/
 dgp eucm t³/₄ k^f kfgⁱ ²n c| w³ p ^v r^k g jqu^Δ ^Δ

crk^audc o gt^Ån o gtv c j kj gvgwgp gt u v²rk j kf gi
 o gi f gto gu v o kpf gp go dgtk vgx²ngp{u²i gx0
 Co gpp{ktg ul ^Ånm²i xcp p{^atqp cl go dgttg. cp{/
 p{ktc pci { vj gt v²ngp c o wpm²u. co knqt pgo
 rj gv jcul p^av xgppk j cpgo eucm c o gi rix v r wul /
 v²lc0

Gdd n hcnf pcm cl w³p cl qm c lqi qu rcpcl/
 ul qm co gn{gm jcl chgr² ul^ampcm c o ci {ct nk^ap/
 f qtn»n»t0 C| xqpc cl gi {gf ^Årk j gn{gu o gi qrf^au.
 jc gi²ul²xgu Ql|gt| f²uv x^amcp^apcn0 Gngkpw c
 ic|fc ku ctte v⁴gnfgw. o gtv gddgp cl gugvdp
 p{wi qf vcp p²|j gvgw o kpf gp guj gv u²i gr². Kk{gp
 n²/₄ ^Ån²p{gm n²/₄ ³/₄v cl qpdc c jcxk l^atcpf»u²i qv
 gn ngm qu|vcpk c vgx²ngp{²u c v²vpp pcrqm n²/₄
 |³/₄0 G| cl w³p cl v gtgf o²p{gl v. j qi { cl ^amcpf »
 hk g²u uqmen nrxgugdd. o kv cl c pcrul^ao. co kv
 c pci { o wpm² kf gl²p cf pcn0 C| gi {ul gt go dgt
 gl v pgj gl gp ²tvwg o gi 0 P gw k i qpf qrv cl|cn j qi {
 c ic|fc wtqwc emqt ku. co knqt ki cl^ap pgo xqrv
 uqm o wpm². co knqt ugo o kv ugo wfqw ul gt gl pk
 j cpgo eucm cl v n²lc. j qi { cl kf ul cnk o wpm²tv
 j^atqo ul qt. p²i {ul gt cpp{kv hk gvp gm o kv pgn0
 Gttg pgo octcfv o gi c jgn²p. gi {ul gt gp gn/
 knpv cl ^amcpf » jgn²t n c pci { o wpm² gn n²u
 qn{cp xk²mg o gpv. cj qn pgo kuo gt v²m²u cj qn
 pci {qdd d²tvner qw0

G| c o gi qrf^au cl w³p ugnkpgm ug j q|qw dqv/
 fqi w²uv0 C ic|fc o wpm²l^av pgo wfvc dghgl|pk
 o wpm²un²|j k²p{ o kw. pci { xqrv c xgu vgu²i g. c
 o gl ic|fcu^aik o wpm²u r gfk i wi {cp i {lv³/₄vg c
 fqm²tqnev c ul gl qpdc. fg gl eucm n²ul »rci qu
 p{gtgu²i xqrv. o gtv gm ^Åv c o wpm² kf glg²u
 emqt grdqu^aqv^am pgo xqrv o^at ngtgugv²u c
 n²ul d n ngngw²ip0 C uqm fqm²t ^Åi { nrcr cfv
 o kvj c pgo ku rgwxqpc0

C ic|f^am dk cno cvcpqm rgwgm c dgx^apf qtn»

o wpm¹uqm¹en u| go dgp⁰ C| ^amcpf » o wpm¹ o kpf/
 km¹dd tkm¹dd⁰ G¹kpvg o kpf gpl²rg dk¹qu¹nt¹»n
 i qpf qunqf vcm xku| cvctvq³m c o wpm¹u h¹gv²u²v.
 gttg o gi i c| go dgtgmpgm hqu| qicv¹»npcm nk²nqv
 v¹m nk ngx⁰ Oquv o^at pgo Ai { euk^arpm jcpgo
 eucm c p^atk kf dgp xgu|pgm hgn o wpm¹u⁰ J k^adc
 h¹gvpgm cmqt ct^ap{nci uqnev. x²i gtgfo²p{n¹r/
 rgp lqddcp l^atpcm ogtv c o wpm¹u v²rk gnctv¹uc
 o^at pgo vgtjgk ngx⁰ Cok l» c ic|f^ampcm c|
 tqu| c o gl ic|fcu^aik o wpm¹upcm vj^av m j^a/
 v¹m c t³k^afgddg⁰ Qn{cp jgn{gmp. cjqn n¹4 gn xcp
 c xcu^av. oquv o^at pgo ku u|¹kgugp hqicfpcm hgn
^amcpf » o wpm¹u. jcpgo v¹rgugp c| kf u|cnk
 o wpm¹uqntc tgpfgl ngfpgmdg⁰

Rgfki gl pkpeugp ¹{ l¹n gl gp ugi ¹gpk nmgpg.
³pn¹pv n¹p^amq|pc c o gi qf^auk rjgv²i. co gn{
 h¹rg² c h¹gnf²u xg|gv. fg co gn{gv uq¹ki pgo hqi/
 pcm wf¹pk gr²tpk⁰ V²rgp c i^atcndcp nmgpg fq¹/
 iq|pk c o wpm¹uqmpcn⁰ Mcpcf c k¹etc c|qpdep o c
 o²i pgo qn{cp pci { ²u uq¹ki pgo ku hqilc c|v
 c p¹k^av o gi jcmf¹pk jqi { kn{gp o »fqp rjgvpg
 qrgt^apk⁰

C| ku lmggo | v¹pgv jqi { c| gi {u|gt go dg/
 tmgv xcn^ai i cn o gi u²f¹km c o²tgvn⁰ Qwjqp
 pci { fq¹qi xq¹v. jc hcn^ad¹n hgm gpv ²rgv²dgp
 gi {u|gt/n¹v|gt Rgvtg. kw rgfki xcn^ai i cn wc/
 |^auk n¹| hqilc gr⁰ Xcp qn{cp dgx^apfqt¹. cnk gi²u|
 Mcpcf^av gi { ²x crw v¹rgugp dgl^atlc⁰ Rgfki c|
 kw ugo eugn¹n¹u²i. jku|gp cmqt v¹ddgv wc|qw.
 o kpv qwj qpt¹»n kf^aki⁰ C| wc|^auv pgo cf¹m kp/
 i {gp⁰ Pci {qp uqm o gi vcnct¹qw r²p| Au|km gn c
 xcu^ak v¹ngwngp⁰ G¹i. jc xcrnk¹n c|v jcmc.
 jqi { qw lqdd c o wpm¹cmemo. o^at wc|km ²u
 pgo v¹4 fkm c|cn jqi { c xcu^ak lgi { o kpf gpv
 hrgo ²u|v. eucmtqj cp²u tqj cp. pkpeu o gi^an¹uc⁰

O kpf gj gl j q| |^al^atw¹ jqi { c rgi v¹dd euc¹fqv

jci {qw qf c| c. c u|gtgvgwkj g| jÀ c u|[¶]kg.
o kpf ki t^alw i qpfqn pci { c j qpx^ai { ku ²u xcrc/
o gpp {k tgu|ngv c v²n o gi r t»d^ancv³uck»f) C| gnu
²xdgp o kpf ki gp p {wi xcrcp. eucm n²u dd v plm gn
o gi o²tj gvgv²gp kf gi guu²i ãn0

P^an²pm o ci {ctqnp^an o²i o kpf g|gnj g| j q| |^a/
l^atw n c| ku. jqi { c nk^apf qtn»m ; 2 u|^a|cfr²nc n²4/
eu³pr²p| d n x^apf qtqnv nk0 Vcr²p o²i g| ugo xqrcp
dcl. fg qn {cp w|uqtcnc o cvq h²gvpgm jqi { c|
go dgtpgm ²i pgm ^am c o²i o gi o ctfv r^at u|^an
j clc0 Vcr²m²u| wco qn {cp o ci {ctcn cnk : 2 u|^a|c/
r²nqu nco cvq h²gv. fg i {cnqtk c| c| gugv. jqi {
n²u|^a| fqn²t²tv h²r²x w²p 482 fqn²tv ngm j c| c/
n²Ar²gpk o gtv m²Ar²pdgp c| qwj qpo ctfqwc m ²t²v/
ngkv gm»v {cxgv {²rk0 G|gp c ngmgv²gp go dgtj ãu/
ngtgungf gm gkp xcrcj qi {cp ugi [¶]gpk ngmgpg. o gtv
kw c nk^apf qtn»pc m dk qp { jco ctqucp o gi i c| /
fci qf pk pgo ngj gv0 C nkngt²Ar²u|gtgpeu²vpgm
co kv ngtgupgm m²Ar²km j c| c. v²rk²g pgo vtwpc m
xku| c ugo o kv ²u c| v²p tgwpgv²gu n²pr²f^auqm x^at/
pcmt^alwn0

C dgx^apf qtn»men vj^av v²/ddgv ngmgpg v²/
t fpk= hg²kk²i qu[¶]cpk ngv. cffki o ci {ct^a|pk pg/
nk m g| gngv c xku| qp {qnev. co [¶]i o gi ²tkm o gtv
gi {u|gtk dgu²f ki c|^ap pgo gr²i pgnkn0 Gi { nteukv
v²/dd i {^ao nqf^au ngmgpg pgnkm o²i j c| c u| c/
dcf^ai tqx^au²tc ku o gppg0 C p²o gvgm c| qti cpk/
|^ar²u o guvtgk dk vqcp [¶]i { ku eul^arp^am fg c|
cpi qn|^au| qm hg²h²qi^au^a»n o guu| g xcppcm kn {gp
ngj gv u²i gn0 ëO kpf gpnk o gi vcpwlc c o ci c n²t^ap
c xku| qp {qnev² ô g| c x²ngo²p { ²u j q| |^av²u km
j qi { ëc| ãi {gu. ²ngvxcn» go dgt jco ct nk²uo gtk
c f³/i²u²0 Gugv²gi gdd n c u| go r qpv²»n pgo ku
xqrcp dcl c o ci {ctqmen j ku| gp pgo guv²pm c
hgl²pm r²i {^atc. fg c| qtkp²v²r²uv o gi pgj gl [¶]ik c|
c n²4²Ar²p { . jqi { c nk^apf qtqnv o ci {ctqm pgo

kuo gtkm c p{grkgv 2u ct^ap{rci pgj gl gp vcpw^am
o gi 0 J c o^at ng|fgvdgp grn gpp²pgm cpi qn lct/
o qntc. Āi { n³pp{gdd xqpc c dqrf qi w¹uwm fg jc
c p{grkgv pgo w¹l^am Āi { qw nkugdd h¹g²uv
ner pcm 2u c|v pgo w¹l^am v tpk j qi { wi {cp/
c|²tv c o w¹n¹2tv pgnkm ngxgugdd lwuqp. o kp^v
cppcm c u|gtgpeu²upgm cnk x²rgvvp Ān cpi qpcm
u| Āngvw xci { o gi vcpw¹o^at cpi qnw⁰

C|^amco pgo eucm c i {^ao nuf^auv j^at¹lc gn
j cpgo u|kp^vg c| gi²u| vgr¹g²uv ku 0 G| ku v¹knwu
co gtn¹ek i qpf qmuf^au 0 Kc|^ap eucm c jcl>/ 2u
xcu¹Aw³tuc¹i qm ngtgupgm c dgx^apf qtn¹u¹up. o gtv c
u|^an¹v¹uk f¹cv o kpf gpnkpgm o gi ngm h¹g²pk vj^av
gi {u|gt gp Āi { cnet¹a^m o gi qrf cpk c rtqd¹o^av.
j qi { c vgr¹g²u o kpf gp vgtj g²u o w¹n¹lc g|gnp¹gm
c v¹tuc¹i qmpcm lwuqp 0 P go t²i kdgp^av ku cf/
vcm o kpf gp kn¹gp vgt²u|gv hgrf cvq⁰ C ěv¹t/
uc¹i qm rgtu|g pgo l>^vu¹up{ kp^v|o²p{gm j cpgo
Āngk x^anercvqm co gn{gm r²p|v cnet¹pcm ngtgup¹0
J q||^am c| go dgtgngv. vctvpcm wi {cp grj gn{g|
ktqf^anev fg c| grx o²i ku eucm c|. j qi { o kpf gpnk
ner ctlc nk o ci^apcm c v|d n c i gu|v¹g²v o²i
cmqt ku. j c n³4 dgp o gi²i g¹kc ng|²v 0

Y kppk gi c|²tv hqvqu c dgx^apf qtn¹u u|go /
rqp¹d>n o gtv c P {wi cv o w¹nej gn{gk¹g kppgp
v¹4^vpkm c u|²vqu v¹u 0 Kv o²i c|^amco pcm ku xcp/
pcm nkx^apf qtn>/qwj qpck co gn{gngv cmqt tgp¹f /
|gw dg. co knqt o ci c ng|gng c dgx^apf qtn¹u 0 G| gm
c|qpdep j co ctquep gn hqi pcm v ppk o gtv o quv
o^at c Pcvkqpen Tck¹yc{u²u c Rcell¹ke xcu¹Aw³tuc/
u¹i. co gn{ c dgx^apf qtn¹uv cf o kpk¹u^arlc. ^an¹v
hgn kn¹gp o gpgf²nj gn{gng⁰ G| gm c| Āl qwj qpqm
uqmmen o qf gtpgddgm ngu|pgm o kp^v c|^amco kp^v| /
o²p{gk j qrw¹c| qkmugo wqnu>n 0

O gi n¹qi cwco c|^amco dgx^apf qtn>/qwj qpck
C| gi {kngv c| ěgn ngn ddi dgx^apf qtn>m u|^ao^atc

vtvq³m hgpp. c o^auknev r g f k i c ën³4³/pu²i gugd/
dgn⁰ t²u²tg tgpfgl^vm dg⁰ C|v o qpf¹a m j qi {
cu|gtkpv qu^vn|q||^am c dgx^apfqtⁿnev. j qi { nkpgm
o kn|gp c twj^alc²u c m¹nglg. fg xcn¹a dcp c|v
o²trgi grkn j qi { nk j qppcp l³4wA G| ku vgt²u²g/
v^u0 C o ci {ctqm tgpful^vgtkpv c ngx²ud² gn ngn
qwj qpd c ngt¹Apgn⁰

C| c h¹pvqu. j qi { c ngw n³4³w w¹cl^vqpn¹r/
rgp uqm m¹3¹pdu²i pkpeu⁰ O kpf gp¹w gi {u|gt
^ai {cm xppcm²u c ngjgv ngj pci {qdd v^u|vcu¹i 0
Kv eucm cffki xppcm c dgx^apfqtⁿm co ¹i gn
pgo jgn|gl km ngv. co ¹i pgo m¹3¹km nk o w¹pn¹tc
ng⁰ Mqu^vqv ku ner pcm ct^ap{|ci qre^u>p. u v cnk/
pgm pkpeu ugo o k r²p|g. o²i kpi {gp ku j q||^a lw/
jcv⁰ Xcp n¹qj c c euc¹f qm u^ao^atc. cj qn o kp/
f gpnk h |jgv c o ci c²u c euc¹f lc t²u²tg. v |j g/
n|gv²uh v cp{|ci qv^ulp^vp kpi {gp ner⁰

Xcp c|²r¹ngvdgp o²i gi { pci { j cm cj qn
vtw¹|nqf pk ¹i pk dgu²ni gvpk ngjgv. u v ëd³4³/pi
ku. cj qn c|qnev vtv¹a m cnknpgm c| ¹i {g pkpeu
tgpfdgp. cnkm c fgrqt^vr¹ut^c x^atpcm cnkn¹gv xku^u|c/
xku^upgm Gwt^ra dc⁰ Fg xppcm qn|cpqm ku n³4³/v¹m
cnkm o kpf gp^atap j c|c cnetpcm o gppk kp/
i {gp⁰ G|gm d¹vgi u²i gv u¹ ¹i p¹rgp¹gm²u cddcp tgo²p{/
ngfpgm j qi { c j cl¹u^atucu¹i qm n³4³m²i²p u^a n¹3¹/
l^am^av ngvc| ~ eg^apqp⁰

Kv o n³4³km Vj qo cu I gng{| P {wi cvMcpfc c
dgx^apfqt^ruk dk¹vuc⁰ V rg h¹i c dgx^apfqtⁿm
uqtuc. v rg tgu¹ngvpgm c|qm cnkm pgo ki c| ¹Avp
²u pgo gi {gpgu u^apf²men r¹rgm^av c| ¹Al xk¹a dc⁰
O kpf gpnk u¹ki qt¹a¹i^atⁿ dgu²n r g f k i ngf xgugdd.
l¹u^apf²n¹dd. dgeu¹ngv^u wtcv o²i ngxgugv r¹v
vc⁰ P ci {u|gt gp²tk c dgx^apfqt^ruk n¹tf²u⁰
f n¹pf¹>cp vcpw^ap{|q||c c dgx^apfqtⁿm o gpvrk/
v¹u²u c| lgrpv²ugkv n h¹i i. j qi { o kn|gp pgo/
|g¹u²i dgx^apfqtⁿmngt¹Ap¹gmc n¹3¹a pcvqu rku¹tc⁰

O gi ngm lgi {g|pk jqi { gi²u| Mpcf^adcp u|gtg/
 vkm c o ci {ct dgx^apfqtñ»ncv0 O kpf gp[~]Aw j cpi q|/
 cvl^am jqi { l» h^{3/4}f o xgn m cnkm ko^afl^am c h^{3/4}/
 fgv²u co kv m o gi o xgipgm c| c h^{3/4}f o²i ku hk gv
²tv0 f ncn^apqu^ai dcp c dgx^apfqtñ uk dk^avqu ku
 qu|vq| kngddgp c l» x²rgo²p{dgp.0

ô Pci {qp ^{3/4}Am^am jqi { o gi n^avqi cvqw. ô
 o qpfqwc c dgx^apfqtñ uk dk^avqu ô ngi cñ^add ucl^av
 u|go²xgn i| | f jgvkm o gi c| kwgpk xku|qp{qnt»n
²u qwj qp hgrkñ^ai qu^aij cvc j qphk^atuck0 i| { c|w^ap
 c|qm cnkm nk cnetpcm l^{3/4}ppk o gi wfj cvl^am jqi {
 o k x^at t^alwm²u o k ku o gi o qpfj cvlwm jqi { o k
 n{gp go dgtgntg xcp u| Am^ai An^a0 C o An^adcp o k
 pci {qp o gi xqñwpm gr^ai gf xg c o ci {ctqm en
 cnkm kw pci {u|gt fqñi qnev rtqf wñ^ancm co k n
 m^añ^apdgp c|qppcn o gi i| | f jgv j c gi { o ci {ct
 vgrgv o gi n^avqi cv0 O kngv o kpf ki pci {qp ²tf g/
 ngngm c o ci {ctqm o gtv c h^{3/4}f gv u|gtgkm go gn
 rgw²tkm c h^{3/4}f o xgr^auv ô ²u kpvgñi gpugddgm
 o kp v c v^{3/4}ddk dgx^apfqtñ»m pci {t²u|g0 O kpf ki v^{3/4}/
 x²p{vku|vgn m cnkmgn cñi xcp xcrc o k dcl. j c/
 o ctqucp dgrg²tkm o ci wnev c| À xku|qp{qndc ²u
 ki gp ²t^vngu rcm^a x^aipcmgppgm| qtu|^ai pcñ0

ô O kpf gpgugtg l» xqpc. j c o gi o qpf cp^a
 qf c^av. jqi { kv pgo n^{3/4}pp{ c o wpne. c t^{3/4}v^{3/4}pk
 o gi i c| fci qf^au pgo xcn»u| p . fg gt u o wpm^axcn
 o kpf gpnkpgm u|^ao^atc o gi p{ñkm c l^{3/4}x²u u|²r
 nkñ^av^u xcp ctte. jqi { i {gto gngk o^at n^{3/4}pp{gdd
²rgvgv hqi pcm ²ipk0 C| c| cl^aprcvqu. jqi { gn u|^{3/4}
 pg x^ai lcpem dgrg o kpf gpl²rg x^ancm u|^audc. j c/
 pgo gn dd kuo gt²m o gi c| kwgpk xku|qp{qnev.
 vpw^ap{q||^am c vto gr^auk ngj gv u²i gngv²u j c
 o^at dk^avquem c fqñi wñdcp. hqi lcpem j q||^a c pci {
 vgtxgm x²i tgj cl^av^aj q|0 O wpm^av o kpf ki ngj gv
 wñ^aipk c hcto qnup. fg c| |cn pgo ²tpgm gn ugo o kv
 j c pci { hcto qnev xgu|pgm²u o^at»ñj qipertc

cnctpcm o gi i c | f ci qf pk0 Kw eucm rucup. r²r² ut n
r²r² utg rgi gvgn tgi cncf pk0

ô P gm ãpm plpeu o^a utc u | ãm²i ãpm eucm h³⁄⁴f /
o xgugntgi o^a u kw pgo ku wf dqrf qi wpl0 G | c |
qtu^a i ci t^a tqtu^a i. cj qn g | gp c v²tgp o² i nkm /
p^a | cvcp vgt ãngvm xcpnc0 C x^a tqunlcp pgo
v t ãpm o gi ã go dgtgngv0 C | c dcl. \$j qi { uqncp
nk³⁄⁴ppgm o kp v h³⁄⁴fo xgugm j qrw pgo c | qm² u
c | w³p c | k rctdcp rt»d^a rpcm gij gn | g | f pk0 G | gm
c | w³p eucn»fpcm² u u | k l^a m Mpcf^a v. j qrw o k
o ci wpm j k f g l ãm j qi { c | k rctk dgx^a pf qtr^a u
k f g l g o² i pgo² tng | gw gr0 G f f ki pgo uqnev v³⁄⁴
t f v ãpm g | gmgn c xkuu | c² r²ugmgn fg g | gm c r² /
| gpi m xgu² n | g | vkm c | qtu^a i dqrf qi wf^a v. vg /
j^a v u | ãm²i xcp dk qp { qu kp^v | ngf² ugn² g0 O gi xcn» /
u | lwm c t² i k vgt x ãpngv0 C | qnev. cnkm o kp v h³⁄⁴f /
o xgugm l³⁄⁴ppgm nk fg c h³⁄⁴f gngp pgo cnctpcm
f qn | q | pk f gr qv^a rpk hqi lwm² u cmqt o kpf gpnk
r^a vpkhqi lc. j qi { g | gp c v²tgp pgo v²qx^a | wpn0

C dgx^a pf qtr^a uk dk vqu ku uqnev dgu² nv ctt»n
j qi { c dgx^a pf qtr»pcm ku. c i c | f^a pcm ku. vgj^a v
o ci^a pcm c | qtu^a i pcm ku² tfng. j qi {^a mcpf »
o wpcj gn | gm rgi { gpgm o gtv c u | cno^a p { o wpc
uqm j^a v^a pp { cn l^a t0 V²rgp c | qm u^a o^a tc. cnkm eucm
k f g ki rpgu o wpn^a v x^a mncm xci { c v²vrgpu² i x^a t.
xci { r g f ki c rgi { gvrgp j k f gi dgp c | gtf k v^a u.
co k pci { qp o gi xkugrk c u | gtxg | gvrgv0 O kpf gpnkpgm

ku eucm c | v cl^a pij cvlc. j qi {² xgu u | gt | f² ugnv
n³⁄⁴u³⁄⁴p. fg co gngwcl v^a p vctvqp ku nk0

O kpf ki g | gm l^a tpcm c | gu | go dgp. o knqt m ãpp
l^a tqm c xk f² ngp² u c nku^a m qo^a uqncp m»dqt»
o ci { ct euqr qt vqnev r^a vqn0 Gi { km per f qn | q | pcm
c o^a ukm per wc | pcm vx^a dd o wpn^a v ngtgupk² u c
nleuk pci { qdd o wpcd² t j^a g c | qppen xqpcvc
ãngvk ngv j qi { c |^a mcpf » rvggr ãr^a u j gn | gw
x² i ki mncpf q | |^a mg | vc | k f cvcp pci { qtu^a i qv0

C O ci { ct Y kppkr gi

C o ci { ct Y kppkr gi o^at pgo qn{cp lgrgp/
 v²mrggp. o kpv c o qpv²gcn⁰ Vw²lf qpn²r r gp o k/
 fgp o ci {ctpcm kf g ngn²pg l³/ppk o gtv c P {wi cv/
 pcm kw xcp c| grq^u w^a m^o u^auc. c l³/f o xgugm
 kppgp kpf wpcm gn c lcto qntc⁰ O²i ku uqnep pgo
²tng| pgm o gi⁰ Ngwi t^a rpcm c xqpcv² n c| qm
 cnkm o kpv^a l³/f o xgugm² tng| pgm² u w²lf qpn²r/
 r gp k²ctquqm cnkm c Mgrgv k²ctvgrgk² c nctpcm
 gj gn| g| fpl⁰ Uqj cugo r² v^a m o gi Y kppkr gi jcv²/
 t^av c| qm ugo. cnkm ctte urgnw² rpcm jqi { o clf
 kppgp lwpem dg c| Gi {gu² w²/f m^o qndc⁰ G| gmpgm
 tgp² u| gtlpv c| c vci² f² k² lwm jqi { pgo eucm Y k/
 pkr gi gv ngt² rkm gn jcpgo c|^a m^o qnpcm ugo r² v^a
 l^a m o² i c u| p² v ugo⁰ Xci { o kpf gph² r² u² r^a /
 o quqm ng² dg ngt² rpgm cnkm cffki jkgi gkm
 co² r² p| v u| ko cvqpcm p^a nwm xci { c jcv² u^a i qm
 v² u| km t^a lwm c ng| ² rgv. cnkm c| w² p fgr qt² v^a m
 ng⁰

Y kppkr gi wee^a kp i {cntcp r² jv o ci {ct u|² v
 jcm² pk m² r² p² ugo co knqt gi {o^a u w² p² tng| pgm
 c vcp² u| rqt² qn⁰ C o ci {ctqm pgo ki gp m² dqtqpcm
 gn c pgnkm kf gi gp x^a tqudcp⁰ Gi² u|² r² v² m c O clp
 Utggvgp l^a u|² fkm r² g⁰ Kw xcp² pcm c jcl² u^a tuc^a /
 i qm ktq^a k² u c Mcpcfck O ci {ct Dgx^a pfqt² n² v
 X² f Kqfc. co gn| o kpf gp o ci {ct o q| i cm² o
 n² r qpv² c⁰ C| qm cnkm o gi jcv² tq| qw jgn| tg o gp/
 pgm c| qppcn kpf wpcm xku| qpv. cnkm eucm dk| qp| /
 v² rcp o w² n² tc l³ vgm c| qm p² j^a p| pcr qv kw
 n² p| v² rpgm v² r² gpl⁰ Kw x^a t^a m c j² r² rgv. kw² t² k² v
 ng| pgm gi {o^a ucn c| ktqfc c|. co k c| kw² pk² r² v
 j g| n² r euq² rlc ng⁰

C| wee^a p o gi r² jv r² v kuo gtp⁰ Ngi v² d² l² v
 pci { u| ² r u dclw² u^a t² n co kvkvugpnkugo xku² r⁰

J c kw xcp gi {/nʃv pcr lc 2u nʃvc c o^au u| qnʃuv.
 tgpfgugp cpp{ktc o²i o qf gtpk^anʃkm jqi { cp/
 i qnʃutc p{ʃlc rg nʃen^au dclw^av. fg c| v³p gi {/
 kf gli Āi { 2t|k jqi { uwv rgw. o gi euqpnʃq^vnʃ
 f nʃqi^apcm c| weecuctnʃp 2u o gppgm c| gi {km
 dgx^apfqtⁿuk ktqf^ad»n c o^aukndc0 O^at eucm c| 2tv
 ku hgp²|pgm c| ktqf^adc. o gtv qfc x^atpcm rǝxgrǝ0
 C| kwgpk kuo gt u³m qfc e^ʃp gl km c| ʃ^aucknev 2u c
 rǝx²m³m j q| pcm 3/43/0 gv xci { eucnʃ^au0 C rǝi/
 v³/ddp gm o²i gnu pcr pkpeu rǝxgrǝ. ô c| co gtnk
 kuo gtk c r qu^vv. pgo ʃ^a gn tg gi {/nʃv j »pcrrcn ô
 x^at v³grǝ gugp. pcr qpw hgrǝ gi { c nkĀi i gul vgw
 v³dnʃ j q| 2u dgv | i gkc pǝx²v0

T³/4 v³p c| gnu pcr nʃvc. jqi { o knʃgp pci {
 j kdc. jqi { pgo wʃlc c| cpi qn p{gǝxgv0 Grp²| vgo
 »t^anki. jqi { nʃuucp/nʃuucp o kpv xgul pgm gi {o^au
 w³p cpi qn p{gǝxvqnev 2u o kpv rt»d^apcm gi {/
 nʃv u| »v gngup0 C| ktqf^adcp nʃrjcv o ci {ct fq/
 j^ap{v. co k o²i ku eucm j c| go nʃngl vgw. 2u gi { nku
 j ʃ^av c| guu| g O ci {ctqtu^ai d»r0

C j cl»v³tuc^ai qm ku xki {^a| pcm cttc. jqi {
 ktqf^alwndcp o kpf ki rǝi {gp xcen^aknk cnk o ci {ctw
 ku wʃ0 C Ewpctf p^an j^ato cp xcp²en0 U cd»
 I {3/4i { . cnk c o ci {ct Āi {gngv k^ap{ʃlc *c| »v
 o^at 3/4^am»u³qwc o ci^av. H { I {3/4i { c rǝi t²/
 i kdd nʃpcfck o ci {ctqm gi {kng. cnk o^at v³/dd.
 o kpv j wu| qp³/v gul vgpfglg 2n kv 2u gi { kf gli c|
 Gi {gu³v/f mco qndcp. o kpv nʃpcfck dgx^apfqtⁿuk
 dk|qu o nʃ43/4w 2u x²i Ān d^akt» \ gej Qu| nʃt. cnk
 c rǝi hkwncdd dgx^apfqtⁿm gi {kng0 C Ecpcf kgp
 Rckk^ap^an Ncmqy Fcpkm». cnk wi {cp pgo o c/
 i {ct u| Āng^vu. fg c hgrǝ²i g o ci {ct 2u pci {qp
 u| gtgvk c o ci {ctqnev c vgrǝr^ʃ2uk qu| v³n{dcp rg/
 f ki R^ape| 2n Nclqu fqi q| km cnk u| kp^vp o^at l»
 j quu| Ākf glg xcp | u| cmj qp^adcp0

C| v dclqu xqpc o gi jcv³tq| pk jqi { j^ap{

o ci {ct 2n Y kppkr gi dgp. o gtv gl c x^atqu eucm^av
 xqpw^anqo^au0 K^g l³ppgm kppgp o gppgm p{w/
 i ctc c| go dgtgm c| qtu^ai dgmgl²dg. c heto qntc.
 cj qn c| ce²nqu d^Àc vgtgo 0 Gi {kn^oa^aukm vcrⁿ kw
 ku xcrco k hqi rcmq^auv. ngo ctcf²u u| crqt[¶]mc c|
 kwgpk o ci {ct nqⁿpkc u^ao^av0 Eucm gddgp c| 2x/
 dgp c| ^ancpf»cp kw rcm^m n³4^Àndgn^Àn j wu qp³4
 eucⁿffcn i c| fci qf vcn0 J q| |^axgv ngi gup Ai { rg/
 j gv xgppk j qi { u^a| /u^a| ³4xgp o ci {ct eucⁿf
 rcrnj cvkmY kppkr gi dgp0

G^lgm n³4^Àn eucm vcrⁿnqo tc nktci cf wpm gi {/
 p²j^ap{c⁰ O kunqre| { K^wx^ap pgi {xgp 2xxgn gl/
 gn w l³4w nk 2u cdrcmk^uv[¶]»^Àrgvg l» j [¶]ppgm ³et/
 xgpf0 O^at dk qp{ pgo dg/u²n l»n o ci {ctwn o kpv
 c| c| ³4gi j cl»uner k^ap{ ugo. cnk c Tgf/Tkxgtgp
 j cl»| km f g d^Àu^l n³p go ngi gvko ci {ct u^ato c|^au^av0

O km»u L>| ugh gn o wprⁿu. eu^api » o ci {ct
 K^vgo ugi ¶ut n xcn». o^at j wu qp³4²xg kw ngtguk c
 ngp{gt²v0

O kpf gp o ci {ct kuo gtk c Lw^lv d^aeukv. cnk c
 x^atqup^anvr^lgu[¶]v^u qn^arcvq⁰

Dkpf^au^l L^apqu j ^Àu^l2xgu co gtnⁿu. c o ci {c/
 tqmpci {qp u^l gtgvkmc dqtflpi j^a|^av0

Mqtqf { D²rc xkmp{u^lgtgn u^lkp^vp c t²i k dg/
 x^apfqtqncm n³4^Àn xcn». 2r Ai { . o kpv P {qo^atne {
 L^apqu. Mqⁿu^lux^at { Cpft^au²uo²i uqncp0

C p {qo fck krctv K^wx^aph { \ qn^ap n³rxkugrk
 cnk [¶]gp³4²xg xcp m^Àpp²u c| gi {gwgp o ci {ct
 rcr p {qo fckli c| i c»lc0

C rcr u^lgtngu^lv lg J qtf »uu^l K^wx^ap. cnk L^a/
 pcuu^l K^wx^appcn gi {^Àw c X²f ktqf^av crcr ¶qwc0
 G^lv c| kp^v| o²p {v rkuucp/rcuucp rknk^ari^am o gtv
 c o ci {ct ^amco nup^lwⁿwuv ^an[¶]q^w hgn Y kppkr gi /
 dgp. co gn^l ^axgwg c o ci {ctqm k^ap {[¶]v^av²u c
 X²f ktqc gflki k jcv^aun³4²v0 X²i p²m^Àn rgi gypg
 o²i hqn^lvcpk glv c p²xuqtv. pci {qp uqm t²i k n^l/

pcfck o ci {ct cnef. cnkm xcrc o gpp{lgp tci cu /
 nqf pcm p{grk³ñj³ 2u o kpf gp o ci {ct o q| i cno /
 d»n² ñ pngp nkxgul knc t² u| Ñngv

Gi² u| m³ñp ñrte vctv| pcm c j qtx^a v o ci {c /
 tqm cnkm o kpf ki gi {Áw o n³ ñ pgm c o ci {ctqm /
 ncn c Dgpeuleu/. c Mrcquleu/. c L³ ñeu. c Mq| qi q /
 xleu/qucñ fqm o kpf gpnqt c o ci {ctqñj q| u| ¶qv /
 vcn⁰ O clf pgo xcrc o gpp{lgp dgpp xcp³cm c
 T»o ck Mcvñknwu U| gpv Kwx^a p Dgvi ugi² n|
 Gi {gu³ñgdgp. cj qñ c o ci {ct u^a to c|^a u^À p² o g /
 vgmgnul qtqucp gi {Áwj cñf pcn⁰

C p² o gvnt n wi {cpc| v ñj gv gro qpf cpk⁰
 Uqj cugo vci cf vcm o gi dgpp³ñngv⁰ Pci {qp l» /
 o »f Ñcm² u Gry qqf qp. Y kppk gi m³ñ^a tq^a dcp
 m³ñp mwdlwm xcp⁰ C j qtx^a vqmñ gi {Áw xci {
 pgi {xgp/pgi {xgp³ w eucñ f. co gn{tg o k o kpf ki
 u^a o ¶j cwpn⁰

—l³cdcp c o ci {ct² ñgv o kpf kpn^a dd pci {qdd
 ñgp Ñngv xgw. co k t² u| kdgp c³ppcm ku n³ u|³ ñj gv .
 j qi { c o ci {ct kpvñki gpe³ gt ugp u| cr qtf kn⁰
 C| kpvñki gpe³ te pci { hñcf cvqm x^a tpcn⁰ Tgpi g /
 vgi o ci {ct xqpwn^a v Y kppk gi gp² u v² ñgp^a v n³ /
 t³ñdn³ñ j^a tqo g| gt/j^a tqo g| gk³ ku^a | o ci {ct vct /
 w| ñqf km c x^a tqudcp⁰ G| gnp³gm c u| gi² p{ ñj ci {c /
 vqw go dgt³np³gm gff ki ku m xqñcm c| ku³ r qñk
 fg o kgn o quv o kpf kpn^a dd v³ ñdgp² u v³ ñdgp l³ p /
 pgm nk kf g. c| gff ki k³ ñgv| gt o vñ^a v nk ñngp³g
² r ¶v³pk² u o gi ñngp³g u| gtxg| p³ C| qm c| go dg /
 tgm cnkm c p{^a t hñ{co^a p eucm kf u| cnk o vñ^a /
 j q| wf vcm lwpk dgw³ f wpcm c v² n vctco^a te c
 x^a tqudc. kv n³ pñ³ fpcm i {³ ñt fpgm g| gnp³gm pc /
 i {qp gmgn c ugi ¶v n³ |⁰ O quv euk^a n³ m o gi c
 o ci {ct u|³ ñgv² i gv. co gn{pgm gn g³ ñg Wlx^a t {
 L³ pqu³ ñx³ ñ= cnk ñpcfck ñttlgt² v u| k³ p² Y kppk /
 r gi dgp ñg| f gv⁰

U^{3/4}i {^atko w^apn^aud»ntghqto^a w^awu r^agm^au}

Gi²u| x²rgwgp^Än c| per²tng|vgo. co knqt hgn/ u| gpvgn²m Dcm^a \ uki o qpf r^agm^au v. c y kppk gi k tghqto^awu gi {j^a| xgl gv l²v} Pci { Äppgr g xqrv g| c tghqto^awu gi {j^a| pcm co gn{pgm w^aw^alf qp/ n²r r gp hgn^a o cf^au^av lgrppvgw. fg c| ^{3/4}^{3/4}o dgp qu|vq|qw c| gi²u| o ci {ctu^ai. ogtv c o ci {ct o q| i cm cm Ä. gt u x^attc vgwgm u|gtv c| gi {j^a| nk²r[¶]u²dgp. co gn{pgm r^agm^au ncr k²p{c r^agu| c| Ä tghqto^awu o ci {ct r cr 0

C| gi {j^a| cnev kv pgo Äi { crcr[¶]u^am o kpv qwj qp c r cr qm²rg^an^alc ugo qn{cp uko c. o kp/ fgp i ^{3/4}f Ä²u p²mÄn xcn». o kpv qf c j c| c0 Mcpcf^a/ dcp c r^agm^agm fwx^al^av gn dd²r Äi { nk r^agm k^awpk o kpv c j qi { h^{3/4}f gv euk^arcm gddgp c xcf qpdcp0 C tghqto^awu r^agm^au| pgo Äj gv dg xcrco k n²p{gn/ o gu j kxcvndc. j cpgo pgnk ku cn»it»n r^agm ngl fgp k c nettigt²v. u v o²i c h^k knck o w^apn^a»n ugo u| c/ dcf xku| ctkcf plc0

Gi gm pgo It^a| kuqm g| xcn»dcp ¶i { xcp0 R^at/ u| excu dgu²ni gv²u o kpf gpt n o gi i { |0 Dcm^a \ uki / o qpf qw^anqw i {^{3/4}p{^{3/4} o ci {ct r cr^audcp c| cpi qn tghqto^awu r^agm^au| k net u| ¶pg gn w. o ^{3/4}^{3/4}wg c j ¶xgm ugtgi g²u c| gi²u| y kppk gi k o ci {ct v²t/ ucf cmqo 0 O gi j cwc j emi cwc c n²pcf ck gi {j^a| k o²n»u^a i qm r^agm^au[¶]v u| cxckv u o kpf gpnkpgm r^agm^av grhqi »f^au hqi v gn co knqt hgn Äi vcm c o ci {ct j ko pwu| fcmco ck0 O kpf g| u|²r²u i {^{3/4}p{^{3/4} xqrv. fg kf^aki c| Ävj quu| Ä²u i ^{3/4}^{3/4}pi {^{3/4}0

ô Co knqt nk^{3/4}wgo Mcpcf^adc. ô ngl fvg²tf g/ ngu grdgu²r²u²v c| Äi o ci {ct tghqto^awu r^agm^au|. ô ki c^ap pgo i qpf qnco ctte. j qi { xcrjc c y kp/ plk gi k tghqto^awu gi {j^a| xgl gv r cr lc r^agu| gn0 O kpv gi {u| gt nk^a pf qtn»²tng|vgo o gi n²v gu| /

vgpf xgn gl gn w0 Hcto gtpgm l^{3/4}wgo . xci { cni t/
o kn(gp o wpi upcm o gtv Gtf²n(dgp pgo d⁴fwo
gn c| v c r²xgi v. o gn{ c o gi x^ani q| qw xku qp{qm
n^{3/4}wvni v²dgp o kpf gp o ci {ct go dgt n²m²tg pg/
j gl gf kn0 Qvj qp vcp⁴unqf wco . fg co knqt ctt»n
xqrv ul ». j qi { À gi | ku| v²pe^k v n²gm v²tgo v²pgo .
ki c|^ap h²m²u| Àngo cttc. j qi { c n²gi gi {ul gt dd
hk kncko wpi xcnhi qo o gi n²gtgupkn²gp{gtgo gv

Pgo j q| wco nk uqm r²p| v²u dk qp{ gl j co ct
grhi {qw0 Uqm| qt xqnc0 Ài { . j qi { gi²u| gp gn/
ngut⁴gw c| À²rv ngo²p{ l^ato c0 Gi { cpi qn
fgv²m²k xqrv c| gm r^atvhi »o . cnk o wpi v ul gt/
| gw p²ngo 0 Gn ul^{3/4} dk qp{ qn{cpv. co gn{ hk knck
gt o gvpci {qp o gi xkugno

M²u dd c| qpdep t^ao v²tgn f^{3/4}w c O t0 Iqj puqp
hi {gm g. cnk r^awc. j qi { pgo gl c|²rguqtu xcn»
p²ngo 0 U| gt| gw gi { n²p{gm gugdd^an^au0 Gi { u^{3/4}/
i {^at wf xct^ap f qii q| wco j cv j »per ki 0 G| ug xqrv
xcrc0 k n²p{gm gu. fg o kpf gpugvtg p{wi qf v o gi /
²ij gv²uv dk v²u²q²w²u cpp{k kf v j ci {qw. j qi {
v²pwj cwco cpi qnw0

ô Gmqt v^{3/4}v²pv c| c hqtf w²cv. xo gn{²rv/
o gv gi²u| gp o^au k^ap{dc n²pf⁴gw0 O gi j cv gi {
38ô 39²xgu i {gtgm cnk²gm c ul Àn k tci cu| n²f w²m
cj q| . j qi { n²gi c^add xcrcnk o ci {ct k^av o qp/
lqp gn c j cvw h²lg h^{3/4}w0 Vw²w²m ctt»n j qi { qw/
j qp ugi²f n²l pk ul qmco kn(gp gugv²ndgp²u h²m²t/
v²m t^a. j qi { c n²v^{3/4}v o ci {ct²rv²pgm o gi cf lco c
j c| ckx²i ku| v²u²i gv0

ô Vgto²u| gv²gpp c i {^au| ul gt v²up^an l²rgp
xqrv c| cpi qn n²m²u| . cnkv pci {qp o gi j cvw dg/
ul²fgo c²w c o ci {ctqm gn r^ai {w²uc. co k²tv
j gv xqrv j ku| gp c v²o gv²ugp c t²i k o ci {ct
go r^an²gm²dtgf v²m h²n0 | tf gm f pk n²l fgw p^aw0 .
j qi { pgo xqrv²n²g j cl²pf ». o kpv o ku| k²p^atkw.
co k kw gr²i i² f k²cv²dep xcp. gi {/n²v o ci {ct

qtul^ai dcp o q|qi pk ug ngj gv0 Dg pg dgu|²rl²Am c|
gi {²pk n|pn>f^auqnt>n c| c hqpvqu. j qi { o quv o^at
o kpf gppgm^{x2}i g0

ô Hgn|gpvgnv rcr lc xci {qm c y kppk gi k tghqt/
o^awu gi {j^a|pcn0 Pci { dqrf qi u^ai qo te u|qn^an
j qi { c|²p Æ {pgxg|gw gi {²pk ncttktgo pgo /
eucm u|qtqucp ³4u|gh²Äi i c| kwgpk gi {j^a|n³4 u²i /
i gn jcpgo xcn>dcp cppcm hgn³o cu|^vuc xqn0
3; 26/dgp. wj^av 46 ²xxgn g|gn w o^at o n³4³4w tg/
hqt o^awu gi {j^a| Y kppk gi dgp. Mqx^aeu{ Nclqu
cncr²qwc o gi ²u v| ²xgp ngtgu|^vÄn u|²r gtgf o²/
p{gngv r tqf w³n0 Gmqt c| qpdcp o gi jcnv ²u c|
gi {j^a|pgj²| Äw³4 /o wpc w³p o gi cncf v0

ô M^v ²xki pgo vcn³ncm ugnkv c jgn²dg.
c|w³p x²i ki f²Äd³4i ³4w c| gi²u| xk³i qp c j^adqtc
xkj etc. co gn| gro quqw o kpf gpv0 C j²kgm u|gtw/
u|>t>fvc m o ci {ct o q|i cm cm k^ap{²v³u^atc pgo
xqnv o gi c| cmcm cu kf 0 C t²ik eucn³fqm ku gn
j ci {^vm Y kppk gi gv. Äcm pgo l³4vgm nqo qn|
o wpn³tc ugnk ugvo i qpf qj cvq³0 Eucm co knqt
gro Äv c xkj ct. ngj gv²w u|>> c| Äcdd u|gtxg|ng/
f²ut n co gn|pgm k^ap{²v³uc c|w³p c| Kwgp nÄ/
n³4³4u ngi {gro²d n t^ao j^atw³0 Oquv o^at xci {wpm
xci { j w| qpj cv o ci {ct n³rkpkvc eucn³f. g|gp/
n³Än n³4ÄdgnÄn u|^a| gi {gf Ä³m> go dgt0 Pgo
uqm fg gddgp c| qtul^ai dcp o kpf gpnk c l³4x tg ²r²Ä0
C| cpi qn gi {j^a| u|²kgugp ugi²v dppÄp²ngv ²u
vcn³p go n³ng|gv²dgp o ctfvc m ft0 E0 [qwpi. c
Wpkgf Ej wtej u qh Ecpcfc xg|²tvkn³t^apcm u|cxck
cnk o kpf p{^alwpm gn w lgnpvgw nk j qi { j q| |wm
gn c| >>j c|^ad>n o ci wpmcn u|qn³uclpnev. gi²u|
²ngvÄp²ngv. j q| |wm gn c o ci {ct rxxgi v. co gn|dgp
c xcn³uqu ²ngv xk^ai c nkp{²v³cv0 Uqj c gi { u|>>xcn
pgo o qpf qwc. j qi { v²tlÄpm gn c| qwj qpk gi {/
j^a|k u|qn³uqm>n jcpgo o kpf ki vku|vgn²m c o k
j ci {qo^ap{clpnev0

ô Oc o²i plpeu o ci {ct vgo r nqo P {wi cv
 Mcpcf c h x^atq^adcp. fg o clf rgu|0 O^at i {lv^{Am}
²u c| cpi qn gi {j^a| ugi {k^gpk hqi dgp^{Am}ngv0 O gi
 xcppcm vt^xglpn0 P {qregl gt fqm^t n^{gm} eucm c
 vgo r nqo h^gr^r {²u²j gl. co gn {pgm l^t2^u2^v nro cv
 o gpvu n⁴u²p c^{cm}a dcp c| kwgpk gi {j^a| hqi lc
 gn rgi gl pk0

ô Mku o ci {ct xkⁱ i qv vtgo ^{Am} kw gddgp
 c pci { d^a dgrk | t|cxctdcp. cj qn cpp{k p {g^rxgp
 dgu|²rpm c| go dgtgn0 C o ci {ct vgo r nqo c o c/
 i {ct ²rgv u| {pvtg rgu|. pgo eucm c xcnⁱuv ^ar qrlwm
 j cpgo c pgo |gk ²t|²ugn^{gm} cf wpm n^hgl n f²uk
 rj^gv u²i gv0 D^{Am} ng xci {qm cttc. j qi { c o ^atek^w
 37/knk App^r2 n^{Am} qn {cp h^rp {gu ²u u|²r xq^r
 co k^g v^rp gi { ²xxgn gl gn w o²i i qpf q^rpk ugo
 rj^ggvwxqpc0

ô Pgo eucm c o ck i gp^gt^aek^v k^ap {^{Am}wm j c/
 pgo o²i c l³k tg ku i qpf q^rwn0 O gi r t^ad^a m^q| wpm
 o ci {ct k^uq^r t^gpf gl²u²xgk ku. uclpqu. o²i pgo
 pci {qp ²r²pm c| ²tf^{gm} f²u0 Fg pgo eu^{Am} i gf ^{Am}
 C o ci {ct u| ^{Am} i {gtg^gk c| cpi qn vcpwⁱu w²p
 o²i ku eucm gn hqi pcm j q| ^apm l³ppk ²u o gi vcpw/
 l^am c o k ²f^{gu}. |gpi |gv^u o ci {ct p {g^rx^{Am}ngv0 Mku
 gu|n⁴ ³amgn u| n⁴u xku qp {qm n⁴ ³v j cteq^rwpm
 fg c|²tv gi { r k^rpc^{tc} ugo rcpn^{cf} wpm o gtv gt u
 x^atwpm^{gm}^{Am}mc o ci {ctqm^kvgpg 00

Gdd n c t³k^f v⁴v²pgm k xku| cr k^rcp^vudⁿ nk
 rj^gv ²tg|pk j qi { c o ci {ct^ai r^{gm}k ²rg^vpgm
 o gi c^rr q|^auc pgo n⁴pp { o w^{pn} | u| cm j q^a/
 dcp. fg r^{gm}gu go dgt^{gm} tclq^{pi}^auc o²i c rj^ggv/
 r^{gv} ku o gi wf^{lc} f³p^{vp}k0 Pgo eucm c tgh^{to}^aw/
 uqm ki {gn^l pgm o ci {ct vgo r nqo tc u| gtv vppk
 j cpgo j co ctqucp rgu| c n^vq^rk^wuqⁿpcm ku. cn^{km}
 uq^men pci {qdd u|^a o dcp ²rpm Y k^{pp}k gi /dgp0 ³p/
^am[»] o ci {ct n^vq^rk^wu gi {j^a| n⁴u²i o²i pgo
 xq^r Y k^{pp}k gi dgp. o quvc| qp dcp o gi c^{cm} {q^w n0

C| cɪcɪnwɔ̃ i { r̥ʉgp I gng { nk^a pf qtr̥ uk h d̥k̥ vqu
ku o gi lgr̥gpv. c| gr̥p^{3/4}m J cp| L^apqu r̥gw. cnk o^a k'
t²i kn̥pcf^a u² u kwo gi r̥gi gv u xci { qp̥vuj gt| gw0

Lgr̥gr̥gi c r̥gpi { gn vgo r̥m̥o dcp v̥t̥v̥pc̥m o c/
i { ct p { gr̥x o k²ngv0 Uq̃»u Kw^ap r̥r̥d^apqu dw /
i »m̥q̥f km c j r̥xgm 3/4u| gvct^{v̥} u^a p0 Ukp̥q̥v. Ocpk̥q̥dc
2tugng o ci c ng| fvg o gi c i { l^{v̥}uv c vgo r̥m̥o e²n'
lctc² u o^a t gi² u| gp vgn̥p^{v̥} n { gu 3/4u| gi i { n̥
3/4u| g0

C| ku² tf gngu² u lgr̥go | gttg c| qtu^a i tc.
j qi { o kn̥r̥r̥gp hqi r̥v̥gū Āpk c o ci { ct vgo r̥m̥o k
Gi { u| gt gp o gi x^a u^a tq̥pc̥m gi { gv co gn| o quv
Āt̥gugp^a n0 Gi { gn tg o² i p̥k̥p̥eu gr̥i r² p| Ām j c
c| qp̥dcp o gi r̥gu| c o gi hgr̥gn 3/4u| gi. Āi { v̥t̥go v
j gvp̥gm gi { nku qwj qp̥v gi { nku l^{r̥} u| ngv c v n̥p̥m
gn| cn̥f vo ci { ct u^a i u^a o^a tc0

O ci { ct v̥cm̥j ctec c h^{3/4}f f gn

**I gp̥vgo cp lcto gt gm̥+*

C| gr̥xgu| vgw j^a dqt Ā r̥gi² t|² ngp { gddgp c o c/
i { ct² v̥gm̥ k² i gv. c o ci { ct k̥v̥gn̥ki gpe^{k̥} v ugdgu^{v̥}
v̥wg o gi 0 C o ci { ct n̥r̥² r̥qu| v̥ n̥ r̥gi n̥gx² ud²
n̥r̥r̥gu gr̥j gn| g| ngf pk c o gi x^a n̥q| qw xku| qp { qm n̥r̥⁴
| 3/4v² u u| gi² p { o gi euq̥pn̥| qw O ci { ctqtu^a i c
o ci { ct k̥v̥gn̥ki gpe^{k̥} p̥cm ki c|^a p pgo wf ngp { g/
tgv cf pk j qm̥w c| gn| cn̥| qw v̥t̥ Āv̥v̥nt n ku kf g
»f v̥nc̥m gl gm c u| gt gpe² v̥gp̥gn0 O ci^a »n² tv̥g /
f km j qi {² r̥r̥gp gl gm c| go dgt gm i qp̥f q̥pc̥m o quv
o^a t r̥gi gt ugddgp c nk^a pf qtr̥ utc² u uq̥nc̥m u| g/
o² dgp h̥m̥^{3/4} r̥km M̥cp̥fc. co gn| n̥r̥ u² i v̥gr̥p Ān c
l^{3/4} x qtu^a i c0 O k̥p̥f c| qm cn̥km gdd n c| qu| v̥ n̥ { d » n
l^{3/4} p̥pgm nk gr̥ wu| w̥p̥cm gr̥xgu| pgn0

M̥cp̥f^a dcp u| Ām̥² i xcp f qri qu o w̥n̥ u n̥ | tg.
co gn| c h^{3/4} f gv o gi o xgr̥0 O k̥p̥f gp o^a uh̥lc̥v go /
dgt. c| qtu^a i lgr̥gr̥gi k^a m̥r̥ q^{v̥} dcp eucm̥vj gt0

C o ci {ct kpvgnki gpekc gi {^ancrf dcp pgo wf o c/
i^a pcm o gi hrgn vgtk»tkwo qv dk vqufcpk} O kpf ki
j cmlwm c|v. j qi { g| gm c| kpvgnki gpu nkx^a pf qtn»m
pgo v³/4 fpgm ugo o kxgn hk knck o wpr^a»n ugo
tkcf pcm xku|c. xku| qpv. j c nkpv eucvpi qmwpm
gddgp c xk^a i t² u| dgp. Ai { hgn² vgp»n eucm c|v v/
rcu| vclwm j qi { tgvpgvgu o gi rt»d^anc^v uqm
w³p. gi { . ngw pgm ukngt»n xcrco k nku gi | ku| vgp/
ek^a v drk vqufcpk c ngi v³/4d o kpf gp hqi cf nq|^a u gng/
p²tg xku| ctkcf c hk knck o wpr^a»n rt»d^a m| km
kw/qw. x²i »n o gi^a nq| | c c|v c r gtegv. co knqt
j cl»tc u|^a m^v u| gttg c xk^a i tc vgw c r^a d^a »0

Cnk m c o ci {ct kpvgnki gpek^a d»n o ci wpc m
dk qp {qu gi | ku| vpek^a v wf vcm dk vqufcpk c| qm
Ai {u| »nk^a p nkx² vgn p² m»n o ci {ct dwukpguu/dgp
xcppen} C o ci {ct dwukpguu pgo o^a u o kpv c o c/
i {ct dgx^a pf qtn»m cf o kplu| v^a n^a uc} C j cl»u^a tuc/
u^a i qm xcu»n^a tuc^a i qm cmcm c| | m ngv. xci {
xcrco k vgrg^a uk cnel»dc ner euqn»f pcm² u o wpr^a/
j gn{ gngv u| gtg| pgm j qphk^a tucknpen} U| gtgr »n
pgm n²p {gi g wrcf qp n² r r gp c qm^a euq^a u. ³/4n c
dgx^a pf qtn»m h»gk xku| qpv u| »e³/4gk c ncpfckm
pcm c ncpfck k^v | o² p {gnpgn} Gppgm c| qu|^a i /
pcm plpeu uqm cmquc} Vgt o² u| gvugp o ci {ct ukpeu
xcrco k tpi gv i } O kpf gp gvgt g c o ci {ct dwuk/
pguu/dgp o^a t v³/4d kpvgnki gpu go dgt j gn{ g| ngf gw
gn o kpv co gpp {kv c o ci {ct dgx^a pf qtn»m gzr gf k^a /
n^a uc o gi n²/4gvrgp} G| x²i gtgf o² p {n² r r gp kv
pgo dcl. o gtv Mcpcf^a dcp hqn{ vqp j cpi q| vcl^a m
c l³/x v² u cpp {k c o gppgm qr v o k o wuwuqcp.
j qi { gn u| ³/4 c u| gtxg| gv v² r^a km o gi² u c| w³ p
x^a t l^a m j qi { c| ² r gv x² tngt kpi² ug o gi kpf^a uc c
pci {u| gt qti cpk^a ek»0 Cn^a t j qi {cp p² | | »m c| qp/
dcp c fqi qv. c| gi {u| gt n² u² i vrgp. j qi { o ci {ct
kpvgnki gpekc Mcpcf^a dcp gj gn{ g| ngf pk pgo wf
² u j qu| Akf gi pgo kurgu| n² r gu}

U Ānu²i gupgm vctvqwo gl v gm qpfcpk²u pgo ku
 dgu²rgm c|qnt»n c pckx^aro qfql»nt»n cnkm ctte
 i qpfqpcm jqi { xcro kn|gp nēpcfck cpiqn co g/
 tknek xci { gugvgi htcpekc e²i ul qn^arv³dc ul g/
 i fj gvpgo G|gm c jgn|gm c| go dgtgknpgm xcp/
 pcm hgpvtxc. ²u dk qp{ j^kdc pci { c fgo qnt^a/
 ek. nqo qn|cdd xgl gv dd rql ¶ek»nkc kf gi gpgngv
 dclqucp gpi gf pgmdgo

Cnefvc m c oci {ctqm n³/₄ Ān o²i ku qn|cpqm
 cnkm pgo hngi gm n³/₄ ³/₄w l^atn³pcm jcpgo c|
²rgv tgerk³uck n³/₄ ³/₄w crerq|^am o gi l³/_k l³ngv⁰
 Mcpcf c l³/_k lg c h³/_f ²u Mcpcf^adcp c| ki c|k dqr/
 fqi w³uv eucm c h³/_fo xgr³u jq| | c o gi 0 Y kpk/
 rgi n³/₄p{²n³p v³/₄dd i gpvgo cp hcto gt xcp⁰ i {
 j ¶k¹a m ngv ²u c| rtqdr³o^alwnev ²tfgo gu n³/₄ g/
 rgddt n o gi hki {grpk⁰ Qwj qpt»n jq| vc m oci wmen
 gi { nku r²p|v. gl gp h³/_fgv x^au^atqncm c h³/_f ³/_p o c/
 i wm i c| f^amqfpcm ²u ki {gn|pgm qn|cp o kpci c|/
 fcu^ai qv r³gv ¶gpk co gn| c l» o gi ²ij gv²uv dk vq/
 u ¶lc pgnkn⁰ G|gm c| go dgtgm eucm cmqt wfpcm
 dqrqi wpk jc o ci wm hqi l^am o gi c fqmji x²i²v
²u Āi { fqri q|pcm o kpv c rgi wqn» per u^ao qu
 qf c j c| c⁰ J c o wpn³uqnev hqi cfpcm hgn jc eucm
 k^ap{ ¶cpk cnetpcm Āi { dk qp{ gr wul wpcm xc/
 i {qpkci v³/_{pntg} o gppgm ²u gl v c| qtu^ai qv ³/₄³/_{ntg}
 ul kf pkhqi l^an⁰

Oci^a w»n ²tgv fkm jqi { kn|gp xku qp{qm n³/₄
 | ³/₄w pgo rgj gv ctt»n ul ». jqi { c i gpvgo cp hcto², \$)
 tgm u^ao c u^a| cntc tĀi pc⁰ Mcpcf^adcp o kpf³/₄ul g
³/₄j cv kn|gp rt»d^amu³ u xcp u g|gm n³/₄ Ān gi {kn/
 o^aukm pci {qp u²rgp dgx^am⁰ I t»h R^arh { I²|^a/
 pcm ²u it»h U cr^at { D²n³pcm xcp n³/₄ ³/₄u hcto lc
 Y kpkrgi v n o^aul²n »t^atc cw»p Ucr vqdp. xc/
 ro kpv pgo o gu|g v n Ām Rnugm I {wrc xqrv jw
 u^atg|tgf gu fqri q| km V{pfc m/dgp⁰ C it»hqm h³/_flg
 862 j qif. c| gl tgf gu² 5420 O quv n³/₄ ²trgv| km U pfqt

D²nc d^aeunck h³/4f dktvqnqu ku. jcuqpn» rt»d^amq|^a/
uqmo ²i Ecri ct{ n³/4p{²n³p hqtf wpcmgⁿ 0

C| cw»pm eucm Ài{ hcnc c nkqo²vgtgngv.
co knqt grjci{wm c x^atqu0 C|w³p nk³twv gn v
v³pm c jcvcm cu rtcklg. co gn{ ²rrgp qn{cp o kp
c o k pci{ o ci{ct Cn³/4f vpm rcr^an{c0 Ugj qn
ugo o k co k c| go dgt vnk³gv²v o gi cncu|vcp^a.
jcvcm cu pci{ d^acv³dr^am tgpigvi o gi o xgrgv
ngp h³/4f. co gn{gp c fwfxc ²u c m»t» ngf x²tg wcn/
nqf kn0 Hxteuc gi{ nk³u². jqi{ ²rrgp c x^atqu
n³/4 gr²dgp xcp gpp{k o gi o xgrgvngp h³/4f d³/4vqm
fg gppgm c o ci{ct^a|cvc c|. jqi{ c h³/4f ur gmw³p/
uqm o^at t²i gp t^a vgw²m c ng| v³u ³{ cnetpcm
pci{ l³/4gf grgo jg|. p{gtg²i jg| lwpl0 Gi{gn tg
rctrci qp jgxgtpgm pgo jq|pcm ugo o kv. xku|qp
c|qpdep o ci^apcm c h³/4f pgm c| ²t²vng^a mcpf»cp
go gmgf kn0

Vkr knwcp ncpfc k h³j^a|cm o ctfq|pcm gn
o ³/4³v³pm xcp n³/4 v³pm p²j^ap|. o gn{ det^au^ai qu
²rggv ngj gn nk o ci^ad»n fg c rgi v³/4d gi{u|gt hc/
d»f². co gn{gv euw^ap c rtemknw³u^ai go gn. m³u
eu³p{tg. ²r³{²u|gk u²ru²i tg dk|qp{ ugnk ug i qp/
fqⁿ0 Gi{u|gttg c|qpdep o gifqddcpv c u|³xgo 0
Mgf xgu. jcpⁱ w³vqu cr³/4f k j^a|ceun^a mqw gn v
v³pm r kxctten o wun³vkmen c| cdrcndcp. u c|
wf xctqp c t²i gp r³vqi² o gu m³u0

O gi ku^a mwpm ²u c ic|f^av ngtguv³u0 J k^adc
nwcwpm hgn o kpf gpv. ô c j^a| p{kxc xqiv ô fg
gi{ rmgv ugo ukngt³v hgrhgf gl pl0 M³u dd c| v³q
o²i ku ³/4u|gcnf wpm gi{ kf gxc»ukxcn u gmqt ²tv
c rgi pci{qdd eucn»f^au0 C| go dgt³pm gm qpf qwc.
jqi{ c v³knw o ci{ct vcp{c w³lf qpqc gi{
wn^ap. ct»n pgo wfqw o ci{ct^a|cvq cfpk jqi{
kf g Mpcfc n³/4 gr²tg nk xct^a|uqnc gl v c o ci{ct
jcpⁱ w³vq0 Uqnhgr² l^atco n³u dd. fg uqj c kn{gp

gtgf gvkp o ci {ct ic|fcu^aiqv pgo vci^anco gddgp
c tgvpgvgvpci {0qtu^aidcp0

J quu| Å wc^au w^ap x²itg dghqtf wnwpm c it>/
l²m hcto l^atc0 Kv pkpeu uqm vngv>tk. gi {km^apm
ngwi tqNv nkp {kqvc c ner w. o ci wpm o ³/₄ ³/₄w dg/
|^atwn0Gpp {kxqrv c j kxcvnu hqi cf v^au0

O kpf gphgr² v^aicu ic|fcu^aik ²r^angvgn j^awn
vci^ap c rgi u|gt²p {gdd o cic c ncmj^a|0 C u²rgu
wf xctqp u|gtv u| »txc i²rgm ²u n²v vcnvqt0 G gm
r>»qn^am c| ³/₄nt³/₄ngv. npxcnv ²u pgo wqn> uqtdep
o ci^avc o wpm^angl gv0

C v^am³/₄ntg gn ngt^an xcrn0 Gi {u|gt o wpm^au/
|wddqp { xcp telv. u|ng delw|c xcn>u^aiicn
gn^av c pcr>n dctp^aqw cte^a>n0 Dk qp { pkpeu
xcrn0 k hqi cf>n²r gu^aner qvdep0 Tgvpgvgu c j /
u²i. c i²rgm n³/₄Ån fqri q|jcvw. o gtv c| k|cfu^ai
²u c| qrl ³/₄u|gxgi {Ånc|^adt^a|cv^ap0

I t>h U cr^at { D²nc xqrv c| gi {km hcto gt0 Kc/
|^ap pgo |cxctvcw o ci^a>0 Gttghgr² pgo ²tpgm t^a
c| go dgtgm xgpf²i gngv hqi cf pk m^ar³/₄p³/₄ugp p^a/
tqp. c pci { o wpm^a kf gl²p0 Cttc kpxk^anv dgpp^ap/
ngv. j qi { ugi^apm dgj clvcpk c vj gpgngv. o gtv
ng|f f kmc hgl²u0

C vj gp²u|gv c it>hqm d^au|ngu²ig. o gtv g|gp
c v²tgp xcn>dep qn{cpv rtqf w^ancm co gn{pgm
o guu|gh³/₄ft n c euqf^al^atc l^atpcn0 C pci { kv^am>v
j ki k²pkmw^ap tgpfgl v²m dg0 Rf²j x^an Å gn w^anc/
pcm c|^ancvn0 O kpf gi {knp gm qw xcp c j gn{g ²u
c| go dgt gm quqn{qf km c m²v²xcn^a v pgxngp0
C| gi {km Dk0 d>. c o^aukm D³/₄uk c jcto cf km Mxk
²u^a { vx^add. o²i x²rgvgn^a ugo cnvf gi { kfgi gp
p²x0 Rgf ki xcp xci { vj gpp {qre^ancv0 O kpf gi {km
j gl xgl gv gi { eu. co gn{tg c|w^ap t^aner euqrc c
xkmp{qu hgl i²rgv0 M^app o gi kpf^am c o qqtv.
c hgl i²rgv t^avgl km c vj²p vi²tg ²u pci {

nepp^a nlc o kpf gp go dgtk ugi ¶u²i p²m^ñ 3/0 rkm c
l^hkuu. pci {u| gt vgl0

G| v pgo xqiv n³pp{ o gi euk^a rpk o gtv eucm
c i²r gv j q| v³ m n^h0 C| gi²u| pgm r^hcmk^hwu cmen/
o c|^a uc c i t»h^hmo w^hn^h lc. c| v^h r^h m^a p{ w^h0

Co knqt o gi kpf wv c i²r² u gi { nku u| cdfc
kf o c^hcf v U| cr^a t{ D²rc i t»h u| ¶xgupp o ci {c/
t^a | i c w^h0 m Æi {pgxg| gw xgi {gu i c| f^a m^hq^f utc
*o k^hcto + v²tv^h m t^a0 H³f^o xgugm² u^a m^hwgp{²u| /
v n^h0 C v^h j gp²u| gv pci {qp l»n h^h gv. fg eucm c vgl
u| ¶²v. c| Æi {pgxg| gw etgco /gv w^h v³ m g^hcf pk
o ci c c vgl o gi o c^hcf0 G| gn c| w³p fku| p»nev j k/
r^hpcm co gn{gnv pci {qp l»n r^h j gv² t²v^h n^hu^h ¶gp^h0
G^ht^hgh^h pgo c | u^h l^hwm o kw vgp{²u| v^h m n^hv.
j cpgo j Æu^h q^a m^hv^hmen o gppgm nk c r^h c^het^h0 O quv
ku p{qre j cv^h cu j ¶ » h^h t^h v dg o ci^a v c j q/
o q^hlc. u j c^hto k^hpen^h v u^h f^h u| c^hcf i^a n^h v gi { g^hm^h/
t^h ¶ gw j gn{gp0 G| gn v^hto² u| gv^hupp o kpf g^hgug^hv^hg
g^h f^htkm c| v. j qi { c i c| f^hcu^a i qv n^hqo qn{ xgu| g^hg^ho
pgo h^hp{gi v^h0 J c c v^hto² u^h v^h g^hg^htp² c l²i. xci {
d^ato k g^hg^ho k euc^a u r w^h u^h ¶^h c^hpc. c|²tv c o gi² i^h g/
v² u dk v^h ¶^h x^h c^hp0

O ci^a pcm c v^hgr^h pgm w^hcl^h q^hn^h r^h r^h gp^h k xg| g/
v lg c o^a u^h km i t»h R^a r^h h{ I² | c. cnk gi {²xxgn g| /
gn w l³ w nk M^hpc^f a dc0 G^hg^hkp^h v^h pgo ku i q^hpf q^hv
cttc. j qi { kw x² i r^h gi g^hupp r^h v^hgr^h g^h km eucm gi {
n^hku² n³ Æ^h n^h c^hctv v^h n^hkp^h v^h p^h0 D^hkv^hnc o gi u^a m^hq^hv
v^h t^h v^h v^h xqiv o gn{gv c| w³p g^hg^h w^hgm v r^h0
C^hpp{ k^h c o gi v^h w^h gw^hgm p^hgnk c| k^h w^hpk xku| q^h{ q^hm
j qi { g^h j cv³ tq| v. o kpf gpv o gi h^h q^h r t»d^a rpk
j qi { r^h j gv^h p^h /g kw o k^h v^h c| f^hcu^a i qv v^h t^h go v^h p^h0
G^hg^hkp^h v^h R^hq^hug^h m g| t^h g^h gu^hgn gi { Æ^h w f^h q^h i q| v^h m fg
c| w³p m^h Æ^h p^h x^a n^hcm² u n^h u dd euc^h v^h n^h q| qw j q|^a
U| cr^a t{ D²rc i t»h0

C w^hcl^h q^hn^h r^h r^h gp^h k q^hti c^hpk^a v^ht pgo xqiv ug/
j q^h0 M^hpp f^h q^h i q| qw c d^hkv^h n^h p^h0 C w^h x^h c^h n^a i w^hpm

pgnk c h³/4f gnp³gm jqi { o gi ngtgu³Am fg eucm
pci {uqñ³tc ukngt³Av o gi vñ³rk³0

ô | p urqtvgodgt xci {qm ô o qpfvc it»h
R^a rñh{ ô g|v c| ãi {gv m³ñ³/p³4g³ co dlekq^añ³o .
pgo ku cnetqm dgn rg pci { jcu|pqv jcpgo eucm
c| c g²ñ³o . jqi { l³/k tg o ci co pcm gi { nku dlt/
vñ³qv tgpfg|gm dg. vgj^av c| ²p gugvgo gv ^anñ³/
pqu³çpk pci {qp dclqucp rñj gv0

ô Co kv kw ñ³v. c|v o^at o kpf o k euk^anwn0
C t²i gddk wñclfpqqu pgo o ci c o xgn³g o gi c
h³/4f gv. jcpgo d²tdgcfvc0 C d²tn dk qp{. co kpv
kw ^anñ³dcp u|qñ³uqu. tcdñ³i c| f^amqf^auv hñ³vc/
vq³0 Gn u| ³/4 tgpfdg|wm c j^a| ñ³4p{²ñ³v u
o quvo^at rñi cñ³dd pgo ngmu|²i {gpñ³g| pko kvc0

ô H³/4f ãpnp³gm ñ³4 ãrdgn³Am c hñ³v o xgr³Am
o gi . c o^a ukñ³gi gn ²u²t²v0

ô Kv gi ²u|gp o^aun³r³rgp ngm fqi q|pk o kpv
qf c|c|c0 G| c h³/4f o²i u| | vñcl. vgj^av vñet/
o^ap{q|^autc i qpfqpk ugo rñj gvp³. jcpgo c rñi/
pci {qdd pgj²|u²i ²r³rgp c|. jqi { o gi cñ³f^a/
ñ³q|wm c m³tqm ²u c f w³x^am gu|crqtqf^au^a0
Gppgm c| qtu^ai pcm c| c rñi pci {qdd rtqdr³/
o^alc. jqi { c u| | h³/4f dgp. jc pgo xli {^a|pcm
gñ³i i². c i c| gi {u|gt gp o gi gu|k c vgt²u0 O^au
o gi qf^au plpeu. o kpv vi ctq|vc³pk ngm ²u g| kf
cñw vñl gup nk ngm vku³çpk c h³/4f gv0 O kpf gpv
gn wf vpm x²i g|pk ñ³v vcmqtten ²u c j q| |^axen»
mwnk^avtqñmer0

C it»h kpxk^añ³v c ññ³uwn³dc ku. jqi { o gi ku/
o gtl³Am o kpf gpper k ²rgv³Amv0 C nup{j^ad»n xcp c
dgl^at^au. c| gi {km u|qdc c j^a|xg|gv p². cñk³ pgo
t²i gp j q|cvem nk ²u cñk h|. vñet³v t^alwm hñ³2t/
pgo l³Amv o quuc »u c rñu|cñ³f v i qo dqnev hñ³/
xcttle0 C o^aukm u|qdc c| gi {gvrgp hñ³cf »u|qdc0
Eucm c rñi rtemkñ³u³cedd ²u c rñi u| ãñ³2i gugdd

dÀqtqm fg qw xcp c| ¶i²r. o gtv c hcto gtgm
¶i { u| qmcmrpxgr| pk0

Pgo xqrv tgpfgu pcr^vtlwm ugo. c| v ku o c/
i wm eulpaⁿn0 C j^a| gi {gvrp f¶u| g. p²j^ap { qw/
j qpk²p { n²r 0

Hgrkxwgm c j^an^u| qd^alwnc ku. qw ku wi {cp/
eucm gi {u| gt dÀqtqm ²u c d t³/p³/m nri pci {qdd
t²u| g o ²i nkulpeu euqo ci qrx0

G| v c| ²ngv ²rk c n²v it>h ²u j c xcrj c xc/
n>dcp u²r dktvnmw ngu|. ki c|^ap dÀu| n²p xcnj cv/
l^am o clf. j qi { o gi n¶p>fcm o gi u| gp^xgf vgm
²tv0

R^a rih{ I ²| c it>h hgn²v c| cw>l^atc ²u ^av
nrcw| qrv dgpp²ngv Rnugm g| tgf guj g| 0 C nri n²/
| grgddk u| qo u²f u| kp²p xci { j Àu| /j wu| qp³/
rgtep {kg xcp0 C| g| tgf gu À ²rrgp cmqt u^amv
rg c vcmqt>n o gtvgi ²u| cmq {cwi fqi q| qw0

DÀu| n²p o wewc. j qi { c| h³/f l^gk uqmen
u| gddgm o kp v c| kwgpk h³/f o xgn m dktvnek o gtv
c o ci {ct h³/f nwm²tc uqmen nqo qn {cdd0 Pgnk
eucm 542 cngtlg xcp. u gdd n 62 cngt c| gtf . xcr/
o kp v 462 cngtv o xgn o gi ²u 62 j qrf tglwg xcp0
G| c dktvnm o^at pgo xqrv cpp {kc grj cp {ci qrv.
o kp v c it>hqn². pci {qp u²r ¶ r²ugu j^a| xcp
telc. rgtu| g c dÀqtqm o²i j^kp {q| pcm fg c
n²p²rg u| gtu^a o qnev o^at grtcmc. grj gn {gl v^c
rn²udcp. o gtv g| kv hqvucdd o kpf gpp²r0

C| g| tgf gup o gi n²v| km j qi { xcr o kmqt j w/
u^at xqrv o gtv t³/₄ v³/p c nrxckcn fleugnfg gw gr0
O gi ku o wewc ngv xcn>dcp f¶u| r²r^ap {qm
qf c j c| c f¶cnev p {gtpg xgn²0 C it>h ²u c| g| tg/
fgu c| qppcn nleugt²n²m gi {o^aucn ic| fcu^aik v/
rcu| vrcvknv. j ku| gp o kpf ngvgp eucm o quv v/
pwo^ap {q| |^amMcpfc h³/f l²v0

ô | fgu ³eu²o. ô o ci {ct^a| v c| g| tgf gu. ô
j c xcr o kv ¶u| t>nwpm Ai { h³/v² vgp²Àn vgf f

j q |^a. j q i { kw eucm c | d q r f q i w n c n k j c l r e p f »
² r r g p q n { c p p g j² | o w p n¹ v x² i g | p k o k p v q f c j c | c
 c | g i { u | g t h³/4 f o x g u 0 M e u k d g p n g m n g | f g p k² u
 r² u t n¹ r² u t g g n t g n g m j c r c f p k 0 P c i { q p u q n e p
 o g i d w n p c m c |² t v o g t v q n { c p i c | f c u¹ i k d g t g p f g /
 |² u g n g v x^a u^a t q p c m c o g n { g n g v p g o w f p c m n g m
 o » f q p² t v² n g u¹ | g p k 0 O g i x c i { q m c t t » n i { | f x g.
 j q i { » x c v u o w p n¹ x c n ¶ | { o k p f g p v x k u | c u | g t /
 | g m c o k v g r k g u | v g w g o q f c^a v ô

C | g u v g n g | f g w t^a p m g t g u | n g f p k p g o o c t c f /
 j c w w p m v x^a d d 0 C o k n u t n k j c l v q w w p m c | w f x c t /
 d » n² u i g p v g o c p h c t o g t g m c j q i { o c i w n e v k u
 p g x g | k m ô w¹ p w p m k p v i g w g n 0 C | x q i v c |² t |² /
 u A p m j q i { c o k n { g p p c i { h g r c f c t c x^a n e m u | /
 v m c | v u^a | g o d g t n³/4 A n c r k i w f p^a x² i t g j c l v c p k
 g i { / n g w 0 O² i m o c i w n u g o o g t k m o q p f c p k
 j q i { f k c f c m c u n u f v m e u c m c | v j c l v q i c v^a m
 j q i { g t² u g p g t i k² x c n p c i { n g m k o g i g t n g v² u /
 u g n v n¹ p u k n g t A p k h q i c n e p c f c k h³/4 f g v w c n /
 o w n d c j c l v c p k 0

Gi { n q t o^a p { | ». c n k p g o u |² i { g p r k
 j q i { A n g v g o d g t

Y k p p k r g i O c p k q d c v t v q o^a p { h x^a t q u c 0 C x^a /
 t q u d e p o² i c n e f p c m o c i { c t q m o ¶ | o c i^a d e p c
 v t v q o^a p { d e p o^a t n g x g u g d d g p² r p g m o g t v c o c /
 i { c t q m k p n¹ d d p { w i c v e d d t e j A » f v m² u v³/4 g i g /
 u g d d g p U c u n e v j g x c p d e p 0 v g n r g f v g m n g 0 O c o^a t
 n g | f g p g m k w k u v² t v h q i n c p k f g v g t o² u | g v g u p
 j q u u A k f h q i g n g r p k c o ¶ | g | g p c x k f² n g p k u o g i
 x g v k n c n¹ d w n e v 0

C n g i v³/4 d o c i { c t Y q q f t k f i g² u D e f i g t n³/4 /
 p {² n³ p x c p 0 U² r A o c i { c t v g n r U r t c i w g. c j q n
 n³/4 A n d n A n 9 2 o c i { c t² r 0 G n u » t x c o² i v n¹ r p k o c /

eucrf fpcm xku| qpv g| gm pgo h²tv²gm o gi gi {o^a u/
ucn²u^a mcpf » xqnc j cte n³4³4w²Ån0

Oquv o^at m²Å³p/m²Å³p vgr² r²km ngv²u o kpv
fgt²m go dgtgngv go n²vgw o gi U » t^af { Kō t²v² u
Hctuci L>| ughv0 Igrgprgi 34 o ci {ct eucrf xcp
c nqto^ap{| » dkvq²p. fg xqncm j Å² cp. jwu| qp/
ngw p ku0 | rrgp cmqt. co knqt qw l^atvo. nerqw
2²tvu² f²uv c nqto^ap{| » hc. jqi { gi { Å² o ci {ct.
eugeugo u| Å²vgwc Xki j/eucrf f p^a r0

Fg pgo eucm l » vrcu| vrcvqm xcppcm j cpgo
tquu| cm ku. c jqi { c nqto^ap{| » hc ulgvw j q| |^a/
vppk0 V³/ddgmgn u| gt| f²uv n³4³4w²gm u g| gm c o gi /
^amcrq^auqnev pgo vtvq²m o gi 0 Cp²m²Å²n jqi {
grō qpfq²m xqpc rcp²u| ckn²v. gi {u| gt gp o gi /
u| ³4mgm hcn²r p²n jci {v²m ngv0 J cmqwc. jqi {
c| qm cnkm gn²xq| vcm c u| gt| f²u gi {gu rqpvlcv
vgtj gugp²gm vcn²n²m u| gtlpv² c| qpdc² pppgm c|
gnp²v²|²uk o » f lc gi²u| gp o^au ngw xqpc0 Gi {u| g/
t gp o gi ngrngw xqpc xgn²Å²m dgu² rpk c fqri qv²u
¶ { c pgj²| u²i gm gnko vncm xqpc0 Oquv o^at eucm
qn{cp o ci {ct h³4f o xgugngv cnetpcm ngvgr² r²gpk
cnkm j clmpf » m j^a| cv ku² r² r²gpk² u ¶ { dk² vq² f² nq²v
p{ Å² vpk ctte. jqi { nqo qn{ c ngvgr² gf²uk u^a p/
f² m² n0

Dgu² ni gv²u n³4 dgp nk{ ¶ v c| clv »²u o gi lg/
ngpv c| ³4gi nqto^ap{| ». ngfxgu o quqn{i » u| gh
³4gi Å². cnk c| cn ng| fv. jqi { pgo cnet kphqt/
o^aek²v cfpk j cpgo kpn²dd u| gtgvpg² tf gm fpk
c o ci {ct xku| qp{ qnt » n c o ci {ct r²ngnt n o gtv
pgnk c| Å² ng² j g| vtvq| km jqi { fgt²m² u tgpfgu
go dgtgngv x^a ni cuuq² nk o gtv pppgm c| qtu^ai /
pcm h r tqd r² o^a lc² rrgp c|. jqi { eucm n² k^a pcvqu
grgo gmg² n³4 m² mo gi 0

ô O kpf gpnk dk² qp{ ¶ j cvlc gttghgr² ô o qp/
fqwc c nqto^ap{| ». ô jqi { p^a n² pm u| gtgvkm c o c /
i {ctqnev. o gtv pgo eucm u| gtgvpgm fqri q| pk j c/

pgo pci {qp kpvgnki gpugm ku. co kv pgo o kpf gp
 dgx^a pfqtn» pgo | gku² it n o qpfj cv» gr0 | p t² i k
 vrcu| vrcvqo crrl^a p eucm c| v lgrgpvj gvgo nk
 jqi { o k c| qnev c o ci {ctqnev cnetlwn cnkm qw/
 jqp ku l» o ci {ctqm xqncm u cnkm kw ku l» go dg/
 tgm o ctefpcn0 C h rtqdr^o c. c|. jqi { cnk pgqp
 ngm Oci {ctqtu^a i pcm cnk tqul. i qpqu| go dgt.
 c| v o k ugo jcu| p^a ij cvlwn c|² tv o k ugo ngmgug/
 f ãpn0 C| | cn o kpf gpnk vku| v^o dcp xcp. jqi { c| »| j c/
 |^a d»n pgo ngmgugf² ugn l³/ppgm gn c| go dgtgm j c/
 pgo c|² tv o gtv c n² p {u| gt u² i² u c p {qo qt ã^a i
 gmgti gwg ngv0 C| kn {gp go dgtgm kf gi gu² i g² u
 p {w| j cvvcpu^a i c² tv j gv. g| gmngn ã { ngm d^a ppk
 o kpv c l» cv^a pcm i {gto gngkxgn cnkngv o gi vkr qt v
 c|² rgv0 | p o gi² tvgm o kpf gpv u j c j q| |^a o xcrnk
 ã {gu/dclqu fqni^a xcn hqtf wv. o kpf ki ki {gng| vgo
 c| v grikp² | pk0 C o ci {ctqm gngp nqo qn {cdd rcpcl
 crki o gt ãv hgn gi {gu u| »tx^a p {qu gugvnd n rgf ki
 ugpnkugo cmqv| cv o ci^a pcmtquu| x² rgo² p {v0

C| w^a p o² i jqu| cddcp grdgu|² ni gwãpm fg w/
 n² p² r r gp c| xqiv c|² tf gngu. co ktg pgo ngt ãv c
 u| »0 Cvnkpu Mephcfc gi {km ngi i c| fci cdd² u ngi v/
 nkp² n² gugdd vctvqo^a p {^a pcm nqto^a p { | »lc. vg^a v
 o kpf gpgugt g xg| gv rqrkknw. cnk c| cpi qn nk/
 t^a n² u^a i dk cm^a v ku d² | lc0 Rt» d^a ni cwco v³/ddu|^{3/4}
 hqtf² i cvpk c dgu|² ni gv² uv pci {qdd² u^a ncn² pqucdd
 rtqdr^o a^m hgr². fg g| uqj c ugo ukngt ãv0 C nqt/
 o^a p { | » gnu uqtdcp ãvgo dgt² u g| v pgo ku w/
 i cflc0 Pgo dwtngn» f | km o kpf gph² rg ht^a | kuqndc.
 jcpgo hqn {vqp eucm qn {cp v² o^a m² tf gmkm co g/
 n {gm n^{3/4} xgw g xci { n^{3/4} xgvrgp ãn jcu| pqv j clvcp^a m
 pgn0 Mpcfc cpp {kdep o^a t Co gtnv. jqi { c| ã/
 rgv kw ugo o^a uqf tci ã jcpgo ã { tci {qi o k/
 f gpnk gn w. o kpv c|² ngv per. co gn {pgm uwi ctek
 n² r gugm eucm dgctcp {q| pk c|² rgv0 Kf gi pppgm
 n² vi cv» pcm pgo knkm qn {cp n² tf² ugnv hngppk

co gn{gntg pgo u|[¶]kgugp x^arcu|qn c|. cmlpgm xkugrv
 o²n»u^aic dk qp{qu nqt^rvqnev hgn²vgr[¶]ñ hgn^rn[¶]v
 c u|cdcf p{krvñ|^au gn²0 ¶|{ rqrk^rnc u|»kdc ug ng/
 t[¶]ñj gvgw u v pci { n[¶]4ic|fcu^aik rtqdr²o^antc ugo
 ngj gvgw dgu²n gvpk o gtv. jc kn{gp n^rtf²uv²tlpvgv
 vgo. ã { eucm pci { ^ancr^rpqu^ai dcp ncr vco x^a/
 rcu|v0

Gj g| eucm cpp{kv u|gtgp²m o²i j q||^avppk
 j qi { dgl^atco gi²u| Mcpcf^av0 Tgpi gvgi go dgt/
 tgn dgu²ngo. o kpf ki o ci c c| qtu^ai xqrv per k/
 tgpfgp. c per k rqrk^rnc c|qpdep crki ngt[¶]ñ u|»kdc
²u n[¶]4ic|fcu^aik n^rtf²ugmpgm ku euw^ap c j gn{k xq/
 pcvñ|^auqm c|qm co gn{gm c| go dgtgm ngn^rdgp c|
²tf gm f²uvhgn w^rl^a mngngp0

Gn ngn^rgw o qpf cpk o kpf g|gn^rv. o gtv gwt»rck
 hqi cm kcmn p²|xg nku² h^rteuc. j qi {j c c| go dgt
 gi { nqto^ap{|» rqrk^rknwucn dgu²n cmqt ku eucm
 c| ã n^rvgo dgt ã n[¶]4 km nk dgn ng. o ci ã c rqrk^rnc
 o²n»u^ai pgo o^au. o kpv c| c f[¶]ju gu tvj c. co g/
 n{gv ã pgrk cmcm cmqt hgn|qnq^w o ci^atc xgppk
²u co gn{pgm tci {qi^auc vcr^rp pci { j cu|p^atc xcp
 c| ã n^rvke²i v²dr h^rp{gu^ri²pgn0

C r tcklgnmner w^a »nc eqy dq{ qnki

*O g f k e l p g J c v * 6 - 0*

Oci {ct Mcpcf^adcp wc|pk pgo n[¶]pp{ f q/
 nqi 0 C vgnr gm qn{cp v^axqn^ai dcp xcp^rcm gi {/
 o^au»n j qi { dk qp{ per qnki ngn wc|pk co ¶|
 gi {km j gn{t n c o^aukntc grlw c| go dgt0 P go
 ht^a|ku c|. j qi { j »per qnev. fg v²p²xgn^rv ngn^rpg
 gn²ngpk jc Mcpcf^adcp o kpf gp[¶]ñ o gi cmctpc
 ht^rf wpkc| go dgt. cj qno ci {ctvngj gvcr^rip0

C|qm c vgnr gm co gn{gnpgm nko qpf qwcp o c/
 i {ct lgn^ri ã mxcp. dk qp{ t²i gddgp ngn^rvng| vgn0

J wu| qp^{3/4}: j cto kpe. u v pgi {xgp²xg⁰C| À o c/
i {ctqm c| À dgx^apfqtn»m lgrgp^vngp{ À vgrgr g/
ngv o²i pgo ku eulp^ancn⁰ V^{3/4}v²pv p²j^ap{ n¹u²t/
ngv|²u c xk¹i^aj^adqtÀ w^ap. fg gl gm o clf pgo
o kpf mw²ctecnx²i| f vgn⁰

M²v À o ci {ct vgrgrt n o²i ku o gi ngm go/
3²ng| p¹pm co gn{gm c xku|qp{qnj q| n¹r guv gr²i
l»n rtqurgt^apcn⁰ C| gi {km *Urtci* wg Ocpkqd^a/
dcp xcp²u kv c o ci {ctqm rcr¹l¹v k¹vpcm c
j qo guv²glgn²u c| w^ap l» v²to l^{3/4}f j^{3/4} lw/
pcn⁰ P kpeu ctt»n u|». j qi { gi²u|gp À vgrgr ng/
ngv|gw xqpc. o gtv xcpcm kv cpi qm co gk/
nckm²u o^au pgo|gk²i gm ku. j ku|gp c xcu¹k
^am²o^au j cv¹t^am²o^au c| Gi {gu¹v/f m²o qm j cv¹/
t^ap. u v kw xcp c x^ao xk¹ui^anev ku. fg c o ci {ct
j qph¹i n¹u eum o quv kpf wv o gi⁰ Xcpcm kv
xci { j cv¹pcp²u ngj gu²i gu. j qi { xc¹o kn¹t
pci { o ci {ct vgrgr ng|⁰

C o^aukm kpi {gph^{3/4}f gu vgrgr *À²u Pqt* dw{.
co gn{t n o²i ng| u|». *Uuncvej* xcpdcp xcp.
Rtkpeg Cndgtw n²u|cmp{wi cvtc. Ngcum o ci {ct
vgrgr n^{3/4}gr²dgp⁰ H ngi o ci {ct dcr v¹u²m o gppgm
qfc²u co kn¹t Mcpcf^adcp l^atwo. j wu|qpj²v o c/
i {ct fqri q|qw c|qp c xk²ngp⁰ Xgl gv l¹m Uq/
o qf/ L>| ugh fgt²mo ci {ct go dgt⁰

C| À o ci {ctqm ngi pci {qdd t²u|g pgo c|cn
c e²mcn o gi { nk Mcpcf^adc. o kp^v c t²i km pgo
cnetpcm qw x²i ngi gupp ngvgrgr gf pk À { vgn¹km
o kp^v c|gn w c| Gi {gu¹v/f m²o qn¹o C|²tv l^{3/4}p/
pgm kfg. j qi { r²p|v ngtguupgm²u c|w^ap j c|c/
v²tlpgn⁰ G|²tv pgo^ancr qfpcm o gi. gl²tv pgo
eulp^aipcm À o ci {ct n¹u²pk²nc⁰ C| À o ci {ct
vgrgr gm ngi h¹ngdd^awqpwn»^am²o^auqm gi {gv²gp
f²vlqi quw¹i wm j qi { c|qp c xk²ngp c o wpnc
tgp¹gupp v^{3/4}ld. o kp^v o^auj gn{*Àw*²u ¹{ kv²tf g/
o gugdd c o wpn¹un¹gn¹gm o gi x^atpk cpcm c|



A prairie

Elöl az autó, amelyen a gazda a fölőjére érkezett, hátul a csöplőgép működik, a fölőken a kovács

kf pgm grō Āf ū^av. co gn{gv v²vgrĀn ngm v³ngpk³/n0
 Ogtv Mcpcf c c| kf ul cnk o wpnc j c|^alc. c| go /
 dgt j q| |^auko wn c vgtō²ul gj g| 0 C| kf l^at^au
 ul cdlc o gi. j qi { o knqt f qn| j cv²u o knqt n²p{/
 vgrp³idg vppk c ng|²v. x^atpk c| v c| kf v. co ¶
 c vgtō²ul gv n²qo dqr c o ci^a0

O clf pgo gi²ul o ci {ct Mcpcf^av dgdctep/
 i qnco 0 V³/ddgv Āngo xcuĀqp²u cw»p. o kp v
 co gpp{kv o ci^av c vgr gngp gn³/mj gwgo 0 Tk/
 n²p r kj gpvgo^ai {dcp. tgp f gup c xcuĀv j^an»hĀ/
 n²kdgp xqpwco o gi o ci co c0 C| v o kpf gpgugt g
 nk ngm lgrgpvpgō. j qi { pgo eucm qw vcf nco
 o ci {ctv. cj qn c j kxcv nqu nko wc^vuqm ku hgnĀp/
 v²km j cpgo dk qp{ xqv o kpf gpĀw. cj qn wc|^au
 n²4 dgp x²ngvgrĀn o gi hqt f wncō 0 Gi {kn/ o^aulm
 o w n²u cn Mcpcf c mĀ²/p³4 r qp^ap v³/ddu³4
 ku³ul gcnf vco 0 Wc| qw kf g/qf c0 Xkvg c uqtu
 gppgm c h²teuc xk^ai pcm gi {km hgn²t n c o^aulm c.
 o kpf ki qf c. cj qn j cmqw. j qi { o w n²l^av lqd/
 dcp o gi h²gkn0 F qn| q| qw o kpf gpĀw. fg dk qp{
 ngt ggv²pgm n²i pci {qddt²ul²v gnw| v0

C| v o qpfl^am c t²ik dgx^apf qtn»m j qi { c|
 Ācnpem g| c p{wi j cvvcp^ai c o kpf ki o gi xqv.
 j c t²i gpvg pgo ku qn{cp pci {o²t^vndgp0 M²v²x
 o kpf ki ngn²w j q| |^a. co ¶ c nkx^apf qtn» o gi ku/
 o gtvg c xku qp{qnev. v²l²nq| »f pk wf qw x²i Ān
 o gi^ancr qf qw xcrcj qn0 C xk^ai j^adqt Ā²u c hqt c/
 f c n cm c| c uqm ul gp xgf²u. co gn{gp ngt gul vĀ/
 o gpvgm vgr gup hgn Ān^am ngnkxk^ai wnev. Āi {/
 j qi { ul kpvg³/po ci wnev j clu| qn^am²u pgo wf pcm
 o gi r kj gppk0 G| gnt n c o ci {ctqnt»n g| gnp gm c
 o ci {ctqm uqtu^at»n mĀ²/p pgo ¶| j cvqm g| gmgn
 vgr xcp Mcpcf c. mĀ²/p³4ugp P{vi cv Mcpcf^a pcm
 o kpf gp hcnlc. x^atquc. kn²dd eucm c| qnt»n dgu|²/
 ngm cnkm xcrcj qn o gi vgr gf vgm xci { n²i c^addku
 j quul cdd kf tg rgr kj gpvgn0

Y kppk gi d n gi {gpgugp f²tp{wi cwc xgwo
 c| wco cv. jqi { gmg²Àl gm c| qntc c jgn{gmtg.
 cjqn nqo qn{cp ngj gv dgu²tpk o ci {ct ngvgr gf²u/
 t r0 C x²i u^amqo^au²u gi {Àwcn c nkpf w>r qpV
Tc{o qpf. o^at gi²u|gp c| Gi {gu²Àw/f mco qm jcv²/
 t^ap xcp. o²i wi {cp rtck²kg/m xk²n²p. fg o^at c
 Tqem{/m c jcwco ujcxuqm²4 gr²dgp0

Gn u|³/₄ *Rqtwi g Nc Rtck²kg/v* ²tv²Àm gn c rtck/
 tkgm ncr w^av. co gn²tv o kpf c n²v xcu²Àw²tuc²i
 xgtugp{g|0 U kpv² r^atj w|co qucp hwpem gi {o^au
 o gmgwc u²pr^atqn0

C| gnu pci {qdd jgn{. cjqn o ci {cttc ngj gv
 cnrf pk< *Dtcpf qp.* pci { xcu²Àk i »er qp0 Gr²i u|²r
 x^atqu. j^awn o kpv²i { fgn²t^aek²n²r r r gp rcpn²u
 f qo dqf cr0 U²ngu wcm hwpem hgr²gr². o kpf gphgr²
 tgp²igvi hc0 K²v rcnkm N²/^at K²p^ae. cnkv c J kuej/
 k²rg | ulf » cncr²Àx^ap{ j q|qw m0 Gn u|³/₄ hcto gtgu/
 ngf gw. n²u dd r g f ki »eunxcungtgungf rgw0 C|
³/₄gi dgpp ²n c x^atqudep. o ci c h | nku j^a| km²l^a/
 dcp. ²u pgo ki gp ²/₄ f knc xk²i hqn^au²xcr0

C pci { rtck²kgm gi {j cpi À²i^av c| *Cuukpk/
 dqk* ncp{cti^auc vgu|k x^anq|cvqu^a ²u gi { nku tq/
 o c pkn²v n²4e²/₄³/₄ c m²À²pdgp gi {j cpi À xk²m²
 pgn0 C uqm dÀ cv²dr n²4³/₄v. o kpv c dgt²À²qw go/
 dgt eucxctqi Y kppk gi x^atqu hqn² »lc0

Mku² ²u|cnp{wi cvpcem eucrwpm hgn ²u gr²tv²Àm
Y j kgy qqftc0 *Hj²t hc0+ Gi²u|gp j c|ck ²ln²r0
 N^aw|cpcm c|qm c hj²t h²m co gn{gnt n gmg²gu|/
 vgn²mc x^atquv. kngwg c hcw0

U^ao qnlwpm rg g|gn c o gi jcv²tq|^auucn ku0
 Mcpcf^adcp qn{cp pci { c| qr w0 k o wu. jqi {
 hcmt »n ugpnk ug dgu²n o kpf gpnk x^atquv go ngi g0
 C x^atqu pgo o^au. o kpv o ci c c| ^amqo^au. u o ³/₄
 i ³/₄vg p²j^ap{ j^a|0 C| wcm o kpf gpgug²g qn{cp
 u|²ngum jqi { c| Cpft^auu{ Àv dgr²gr²tpg0 O kpf g|v
 c|²tv eulp^al^am jqi { xcrc0 knqt c| cw »m p{wi qf/

vcp u^ai w f j eucp em o cl f telv. o quv c| qpdcp c
 Dtqc f y c { rgi h r i g d d v̄ / v̄ k̄ g p n̄ v j^a | d » n^a n̄ O k p /
 f g p̄ Ā w c | q p d c p q w x c p c i c d q p c g r x^a v t . n̄ 4 x g v̄
 r g p n e r e u q n e v c h̄ 3 / 4 f f g n k f g u^a n̄ f̄ m d g c n̄ 4 p { 2 m
 h̄ 3 / 4 o x g n k c i c d q p^a v̄ O c i c c x^a t q u k u e u c m c
 h c t o g t g m n g f x²² t v x c p 0 O k p f g i { k n l g p v c r̄ i j c w »
 g i { u^a m q f c² u x g p f² i n . f t w i / u v q t g . x c i { k u r c /
 v̄ n e . h u | g t g u Ā r g v x c u n g t g u n g f² u . u | g t u^a o^a t w /
 u f̄ » j g n { g m² u p g o w q n » u q t d c p c w q o q d k n Ā r g v .
 c j q n v c m q t q n e v² u i c | f c u^a i k i² r g n g v k u r g j g v x^a /
 u^a t q r p k̄ O k p f g | d g n g h̄ t c d d c c p² j^a p { j^a | d c .
 v̄ 4 d t g p k p e u k u u Ā n² i 0 F g c |² t v x^a t q u .² u o k p /
 f g p n e p c f c k o g i u² t v f p g . j c h c n Ā v x c r n k r g d g /
 e u Ā p² 0

O k n q t c | g n u v o g i n̄ v c o . c | k^a p v² t f g m f /
 v g o . j q i { j^a p { n k r p o² v g t t g x c p k f g o c i c c x^a t q u .
 x c i { h c n Ā o g t v c | v j k w g o . j q i { c |^a m q o^a u n̄ 4 Ā n
 e u c m p² j^a p {² r Ā r g v d Ā u r c n q f k n̄ M̄ u d d o^a t c p { /
 p { k t c j q |^a u | q m c o . j q i { c n k u x^a t q u q m u² r u² /
 i g k v k u h g n w f v c o k u o g t p k̄ 0

Y j k g y q q f p c m p c i { l g r g p v u² i g x c p o c i { c t
 u | g o r q p v d » n̄ 0 K f g l̄ 3 / 4 w g m c | g n u o c i { c t v g r r g u g m
 k p p g p j Ā » f v c m h g n c | w^a p G u | v g t j^a / c . M c r q u x^a t .
 U q e n j q r o h g r̄ . c o g n { g m o c k u x k^a i | » o c i { c t
 v g r r g n̄ 0 Y j k g y q q f u | k p v² p q n { c p n k u x^a t q u n e .
 o k p v c j q i { r ḡ t v c o 0 C t² i k v g r r g u g m n̄ 4 Ā n o k p /
 f g p n k k u o g t k V v d c L » | u g h d k k^a t f v g t o² v . c j q x c
 u | k̄ g u g p d g v n k p v g p g n̄ 0 V v d c n̄ 4 p d g p o c i c k u
 h c t o g t . h g r u² i² p g m^a n c r̄ p q u c p g r k u o g t v n q p { j c /
 n g t v i c | f c u^a i / c x c p 0 M̄ r o^a p L^a p q u d^a v^a p m n k /
 x^a n » h c t o g t . o k p f g p n k u | g t g k R k t q u n e K̄ o t² v² u
 C p f t^a u v . v c r̄ p c r g i 3 / 4 g i g d d o c i { c t h c o f̄ k^a m
 g i { k n g c U 3 / 4 n̄ 4 u / e u c r̄ f c | q m n̄ 4 3 / 4 v . c n k m o² i
 o k p f k i k w r e n p c n̄ 0

C o c i { c t q m c | w^a p j c o c t q u c p h g r h f g | v² m
 c | v c i { 3 / 4 p { 3 / 4 h̄ 3 / 4 f u^a x q v . c o g n { c o q u c p k x k /

t^ai | » o ci {ct vgr gm hgr xgl gv0 Ucd» Hgtgpe.
Cdq{k *Kux*^ap. *Fqo qu/rk* ²u v³/ddgp gttghgr² hqi/
 vcm j qo guvcf/gv. cj qi { c 32 fqm²tqu h³/f gngv
 gi²u Mcpcf^adcp pgxgl kn0 Retrci qp j gxgtvgm
 pgo ngrngw o^auv euk^apk xgn²m eucm ki²p{v lg/
 rpvvpk dg t^a ²u dngt²gpk0 Jcto kpe o ci {ct euc/
 n²f ulgt| gw ² { h³/f gv o ci^apcm gl gp c xk²ngp ²u
²p²i kwxcpcn0

Kpfkcp Jgcf c n²/xgng| x^atcu. co gr|pgm
 o ci {ct ulgo rqpvd»n v³/v²pgvg xcp0 Uqm kw c d^a/
 p^avk ux^ad. fg o c o^at pgo pci {qp ²tkpvg|pgm c
 o ci {ctqmen ^ao d^at c o qpctej kcdgk ncvpck
 n²p{xgkngv o kpfki o wqi cv^am u c o ci {ctqnev
 o kpfki ul²gugp hqi cf l^an0 I gfgqp Crcf^at n²u²t/
 rvg| gw kw n²v ²xxgn gl gn w vgr ²uugn fg dk qp {
 c| gi²u cnek» o gi dwnq²0 I ngpp gltgf gu v² gl gt
 j qif l^av xgv²m o gi c o ci {ctqm hgr|gtgr²ugmgn
²u^ancvqmen gi {Aw. fg ok vci cf^au. c| gru vgr/
 r²uk o q|icrqo eu²p{c m²ctecn x²i| f³/x0
 C h³/f pgm gi { t²ul g l». gi { t²ul g tqul xqn. c
 i {gpi²dd h³/ftg ugnk ug cnetv o gppk ²u pgo ku
 x^anqi cw^am nk qwj qp c o gi hgrgn go dgtgngv0
 Qn{cp go dgtgm rt»d^am|vcm h³/f hgrgw fkcfc/
 o cunqf pk cnknpgm ctt»n j crk^ap{ hqi cm c ugo
 xqn0 Dk qp { o gi dwnq² w c| gi²u ²u o kpf c| qm
 cnknngddgp c| Ai {dgp ulgtgr gngm gi {o^auvx^af qn^an0

O kv m²l»| wo qv go n²go. j qi { gl gm n²/An
 xcn» *Pkyj* I {³/i { . cnk *Vtorkpi Neng/p* uclqv
 i {^atv0 X²ngvgn²An gi { o ci {ct eucn²fp^an o ci co
 ku o gi n²uvnco c nk^an» vter r kuc uclv^av0 *Tglu/*
Lcndt»n dgu²rk m j qi { ^aul³/n²/w c| Gi {gu²An/
 f nco qndc. c| qpdep gthqi v²m j cv j »pcr ki An. ²u
 o quv o^at xcrj qn Vqrpc o gi {²dgp gro²mgf km n/
 pcf ck²m²p {gk n0

Vgrlgu ²ul cnc j crcf wpm ^av Ucgn²evj gxcp
 d^a ch³/f lglp²u tgi gno^at *Crdgv^adcp* xqnwpn0

G| c| qtu^ai c o gi ngr gv²ugm qtu^ai c0 Gf f ki dÀ c/
 v³dn³m dÀ c³v³dn³m w³p. o quv r g f ki nk²i gw. gnu^a/
 tcf v h³f gn0 K^v xcpcem c pci { o ctj cvgp {²u| v
 vgrgr gn0 J c pci { tkn³p n³wpm go dgtv. c| dk qp {
 eqy dq { . cj qi { cp c o q| kn³»n kuo gt¹Àn0 ~ t^anj qu| /
 u| cp^av u| cxf c xcu^Àv cp²m^Àn j qi { go dgk cteqv
 r kn³pcp^a pmo gi 0

C| wqn»^a m³o^a u. o kgn w Ngj dtk i gv. c|
 gnu pci { qdd o ci { ct vgrgr gv²tk³v²pm *Ogf kelpg*
Jc v0 O ci { ctwn pgo lgrgpv o^auv. o kv i { »i { u| gt/
 n³er0 C x^atqu m³pdgp qppcp n³er v c pgx²v.
 j qi { ^an³»nci gi { k³f³ppcm c i { gto gng dgvi /
 xqn. k³gh³tf wv gi { qtxquj q|²u i { »i { u| gtv n³tv
 v r³0 O gi ku n³er v »u pgj qi { c i { »i { u| gtpgm xc/
 rco k dclc n³i { gp. gm³tv³ c| qtxqu n³er l^av ku0 C| v
 c u^al^adc xgwg²u Ài { Àu| qw^av c l³ngw nk³peugn
 c h³n { »p0

H³teuc pgxgm vnk³v²dgp gi {^ancn³dcp²tf/
 ngu qtu^ai Mpcfc0 K^v xcp r²rf^awn Oqqug Lcy
 x^atquc. u| »u| g³tk³v i¹l^axqtu| c³xcu^a m³er que³0 C v³/
 v³pgv u| g³tk³v gi { h³cto gtpgm gl gp c jgn { gp gn³/4³/4v
 c n³q³euk³ng³gn³pgm c m³Àn lg²u c| À³l³rgp vcn³nv
 l^axqtu| c³xcu^a m³er eu^av vgw c jgn {²tg0 Fg pgo /
 eum kn { gp tqo cp³kn³wu u| go rqp³qm²tx²p { gu³À³gm
 jcpgo co kn³qt c xqpcv À³l^av nk³gn³/n³m gi { u| g/
 t gp c| CDE dgvl g u| g³tk³v ng| f³v³m c| ^am³o^auq/
 n³ev gmgtgu| v³pk c lcr^ap²u qtqu| j^adqtÀdcp rg/
 fki c| cm³qt²r³À³v vgrgr gngv h³ix^anxc gi { lcr^ap
 xci { qtqu| v³dqtpqnt»n gugv³gi gi { eucv jgn {²/
 t n pgxg|³v³m gn0 ¶ { ngw M³vtqnk Vqi q. Rqtv Ctj wt
²u v³/d³o^a n³epcfckx^atqu0

Ngj dtk i g n³epcfck o ci { ct d^ap {^au| x^atqu.
 gi { km n³i t²i kdd o ci { ct vgrgr. gn dd c| qpdc³o²i
 Tc { o qpf dc u| cxf wpm ng. cj qn ewn³qt³À³ngx²p { gm
 xcpcem²u cj qn o quv u| À³ng³km o gi c| À³ o ci { ct
 vgrgr 0

O ci {ctqmc eqy dq{qmj c|^a l^a dcp

*Tc{o qpf. *ð -θ*

Ngj dckfi gdgp ngmgw^a u|^a mpwpm jqi { c rgi / f²rgddgp hgnx Al o ci {ct vgrgrtg. Tc{o qpfdc gr / lwjcuwpm0 Kv xci {wpm o^at c jcxcm cu jcxuqm c Tqem{m cri^adcp0 Gn w^{Am} *Eqcnf erg.* c pci { u|²po gf gpeg. co gn{ cpp{k o ci {ct d^ap{^au| pcm cf ngp{gtgV0 Kppgp xg| gv c| Àv^av Dtkkuj Eqnw / dk^adc0

G| c xkf²m o²i ki c| k Mpcfc. co gn{t n c j[¶] tgu um>v xlee qn{cp lgn^o| gp tgi²r0 C um>v xku|c^vtv j c|^a l^a dc²u o gi n²tf g|^v m v rg. x^allqp xcn>dcp qn{cp t³kf kf gki vctv^g c p{^at²u| cm h³4f l²pA C um>v gi {ngfx gp hgrgn< è²p pgo wf / jcxqo. o gtv eucm w| gpgi { j»per ki xqnc0 Mpc / f^adcp²u cffki pgo xqiv p{^at[#] Cpgnq^v pcm hgr / v²vgr^{Am} pci {u| gt . fg dk qp{ p{^atq^p qn{cp pci { c hqt>u^ai . j qi { m t³4 / n³4 Ành³4r gt| ugn0 kpf gpv0

C jcxuqnp v^{Am} o^at o^au xk^ai xcp. c ej kq / pqm u|²n lcr^apd>n j q|^a v o grgi^a tco rvqv. gi {Àv j crcf c Eugpfgu>eg^ap i qrh^a tco rv^vxcn²u c|²i / j clrvqv gi {gprvgu² vgu| k0 G|²tv vgtgo pgm kw c pci {u| gt n^{Am}wo dlck i {Ào³4eu³4m co gn{gm hgrg / u| km c xgtugp{v c nerkhqtplek k0 rqtwn k0 C o c / i {ctqm c o Àndcp eucm gffki lwqwm gn o quv c| qpdep o^at^a vo gpvgm c jcxuqnp ku *Okej gn Pcw n H²tpk*²u v³4d o^au n³4u²i dgp vgrgr gf vgm r0 Dtkkuj Eqnw dlc o kpf gpgugt g c| c| qtu|^ai . cjxc c l³k nk^a pf qtn^auc c| . gwt>r ck^a nco qnd>n v³4gnf pkhji 0

C xqpcwpm f²ipgm x^ai qw u vx^add ku gn^{Am} Cndgtv j kj gvgrp pci { nkgtlgf²u tcpej g/gk0 Co gttg c u| go gn^av o kpf gp^{Am} nqr^at xkf²m cri

dÀwn kwqw gi { nku h 0 Oclfpgo o kpf gpÀw nřv
 ngt[¶]u. gi { km ctte. ul qni^an jqi { c|. ^ancv[¶]nqo^ap {
 pg v³/4³p tclvc ngtgu v^Àn c o^aukm r g f ki c dqt|cn/
 o cu jxccl^auqm gmgp x²fgrgo 0 M ngt[¶]ugm gl gm
 co gn{ gm t²|uÀcp xcpcmc c h³/4³dg ^auxc ²u h³/4³
 vctv^am c pci { j[»]xlj ctqnev. pgjq i { gmgo gu²m c
 u[¶]pgngv 0 Pci { i {qtucu^ai i cn tqdqi wpm fg o²i ku
 eucm o kpf gp nřvj^atqo »t^adcp ngjgv gi {/gi { ^an/
 ncqv hghgf gl pk co kv c n[¶]wjcv^t ul²r²p nři gr²/
 ul kn 0 C pci { ^ancveuft^am o gu| g xcpcmc c xqpcv/
 »n pgo gpi gf km gttg ngv. pgjq i { c xcf ^ancvqm
 pgnkqpwcpemc xqpcvpcn 0

Tc{o qpf xcuÀk ^anqo^auc ²r r gp qn{cp. o kv
 c v³/4³dk fg o c i c c x^atqu gi { eu³/4³rgv ugo jcuqpn[¶]v
 nc v³/4³dk nēpcfck ek{/tg 0 Tc{o qpf qn{cp. o kv
 xcrcok pci { o ci {ct hcw gi {gvrgp ul²rgu wee^a/
 l^axcn dqt|cm cu j qo qmgpi gt²xgn co gn{ dg xcn/
 u^ai i cn dgrgu^Àrgf c pci { i {qtucu^ai i cn tqdqi »
 cw»pn 0 C| Àu²rgp p²j^ap { hc ^atx^aunqf km c hgr/
 ul^am» rqt o gir kj gp c xcrcoknqt vcr[¶]p |³/4³ rēxg/
 rēngp 0

C nku ul^anqf^adcp cncrqucp o gi ngnmw o quc/
 nqf pwpm c tc{o qpf k rqt dgrggwg. dgrgo ctvc o c/
 i^av c twj^apnalc 0 Co knqt nřv²v[¶]nwpm c| wee^akc.
 gi²ul gp gi |qvkwu nřr hqi cfqw 0 C| weec nř³/4³gr²p
 i {³/p {³/4³À nřxqp gi { nř^ap { x^ai vcvw. vgt²ul gv/
 ugp pcft^aidcp. hgl²p eqy dq{ nērcr 0 Dk qp{ plpeu
 o²i dwdk[¶]kw^alc. c nērcr lc c»n nkdwi i {cpcm c
 ul ng h^Àv³/4³n 0 Pgo uqn[¶]tc rqt hrij v^Àpvgw gn ngf/
 xgu cncn^av fg o^at Àlcdd nřr tci cfvc o gi c
 hki {grn gv 0 Kc| k eqy dq{ rqtqu nřv gn w^Àpn 0 C|
 go dgt ³/pn[¶]p {vgrp^Àn nř³/4³Àp²|. plpeu/g xcrcj qn
 o q| ki²r. o gtv jku gp eqy dq{qnev o^aunřr gmřr/
 |grpk ug wflwn 0 Gi {ul gttg eucm o gi p{qo lc c nřxc
 qrf cñv. c rctk c gi {gv wtkm u nřj clxw hglgn tq/
 j cp gn tg 0

Xcɾl^a dcp pgo ku qn{cp xcfcm gl gm c nɾxcu/
 n¹n0 Gi { o^a ukm rctkr c eu³/pf gup r¹rngf. o gi ku
 xcp c| qnɛ t^a< p²i { nku n¹p{ Ān telvc. c| gnu
 hqi lc c nɛp^vt u^at^av0 ˘i { o gppgm c| kun¹dc.
 ¶i { o gppgm o kpf gpj qx^a0 Xcɾo k qn{cp pci {
 ¾u| gɛpwn¹u xcp c i {¾p{¾ nɾxcm²u c i {gtgnm
 n¹¾¾w jqi { uqj c dcl. xci { ngmgo gvgpu²i pgo
 hqtfwn gn. r gfk i vɾ¹p j cpi uAn{q|pk ug ngm jqi {
 p{gti gv gttghɾ pgo ku ki gp kuo gtpgm o kpf gpnk
 u| t²p Ārk o gi c nɾxcv0 C| v u| qm³m o qpf cpk jqi {
 c o ci {ct nɾxcupgo | gv. fg kfg vɾ¹p o k ku gr¹¾ gv
 p²pmo²i gi {gv^o a uvcpwpk0

Qw^a mco c u^a nɾfc hɾ¹pcm v^o cu| nɾfc²u
 gp²| vgo c u| ¶gu. grɛxgp² ngvgv. co gn{pgm mĀ¹¾
 p³u²i g o gi tci cfvc c ngmgo gv0 Gi {u| gttg eucm
 euo » o wɾn¹ugo dgt j cɾf gno gmwgo 0

ô Glp{g. fg fgt²m n# ô hqtfwn qfc c o^a ukn/
 j q| . o gi^a npc²u o gi kpf wnc vtghgtg0

Oci {ctqm o ci {ct o wɾn¹uqm cnkngv kfgj cl/
 vqwo gu| kfgi gpdg c ngi {gvgp² ngv0

J co ctqcp dgu²fdg grgi {gf Āpn0 Grv pln
 o kpf p{^a lwpm gn n c| c hɾteuc²u mĀ¹¾¾ xk¹i 0
 Oci {ct uqtuqm o ci {ct n¹pⁿ f^auqm o ci {ct tg/
 o²p{gmi ¾f Āp¹gm| go Āp¹gr¹0

Tc{o qpf c ngi h¹ku¹gdd o ci {ct vgr. co gn{tg
 pci { l³x x^at0 O^at cɾf p²j^ap{ o ci {ct hcto gt
 ku c xk²ngp. fg c ngi v³dd gi {u| gt h¹¾f o wɾn¹u0
 C| gi²u| n¹¾p{²m hgngpf Ā¹u²v c ewn¹ti {^a tpcm n¹¾
 u| ¾pj gv0 Ecpf kgp Uwi ct Hɛvqtkgu Nko kfg tgp/
 fg| gw kw dg r qo r^au o qfgo ewn¹ti {^a tv0 C|
 gi²u| n¹¾p{²m pgnkm vgo grk c ewn¹tt²r^av u c|
 gnu ewn¹tt²r c i {^a tc gi²u| Mɛpcf^a pcn0 Gf fki
 pci {u| gt gp dgx^a n²u o^a tku ctt»n xcp u| ». jqi {
 g| gp c xk²ngp v³dd ewn¹ti {^a tev cɾr ¶pcm co g/
 n| gm c| w³p pci { ngpf Ārgwgn hqi l^a m i {^a tvcpk gl v
 c hqpvqu k ctekn¹gv0

C i {^at wɔɾlf qɔquck o qto qɔqɔn0 C| gi {kɔgv
 QDtkɛppgm c o^aukɛv Gxɛpɔcm j[¶]kl^an0 C o qɔ/
 o qɔqɔm pci {qɔ u| gɔv²ɔgv . fgt²m go dgtɔn0 C| vgt/
 o²u| gɔv. jqi { Ā ɔgvgo dgtgm o gtv Co gtn^adcp
 o kɔf gɔnk c|. xku| qɔv c| qɔdcp ki {gɔv| pɔm o kɔf gɔ
 o²n³p{qu n[¶]ɔ^a p^u i qv vɔɾlgu[¶]gɔk0

C|²tv cɔɛf qɔ{cp ku gɔi. cɔnk u| kɔlc ɔgv0 Uqm
 nku hɔto gt hɔɾɔi cf qw o ci {ctqɛv cɔnk c| w³p
 pɔnkɔm fɔɾi q| vcm²u n²u dd dk qɔ{ c h[¶]g²ut n o gi /
 hɔɾf ɔv| vɔn0 C| k²p o^at c i {^at x^amɛn hɔɾɔn uu²/
 i gv²tv²Am²u c o gi fɔɾi q| qw o wɔnɛ ct^ap{^adcp cf
 gɔ ɔgi gv c h³f o xgugɔpɔn0 i { c| w³p o kɔf gɔnk/
 pɔm c| ci {^adcp c| xcp. jqi { c i {^at o ci c| qɔnɛ
 o kɔf gɔ tɔpɔf gu²u tɔpɔf gɔvɔp fɔɾi pɔn0 C hɔto gt
 eucm cɔɔt cɔɛt h[¶]gɔk jc o^at^at^aĀ²tv o gi nɛr vɛ
 c i {^at^wn c r²p| v c o wɔn²uv c i {^atj q| m[¶]ɔf k²u
 ¶ { c| ki c| i c^w 2u c h³f o wɔn²uqm n³4³4^w i {cɔɔtk
 c p²| gɔv²t²u0 C| v ugo u| cdcf gɔɾɔl[¶]gɔk jqi {
 Mɔpɔf^adcp xci {wɔm²u c o wɔn²up²r i {qtucp
 u| gɔf k c u^aqɔl²l^av0 J c c| qɔpɛn r²p| v nɛr. o kɔ/
 i {^atv xqɔvɛt Ā n²u gugvɔi c ɔgi pci {qdd o wɔnɛ
 kɔ gl²p jci {lc qwɛ xk²ɔgv0

Gi { t²ik c^w»p tqdqi qw xɛɔnk hɔɾ²pɔn0 J co c/
 tqucp o gi wɔf wɔm jqi { c| gi {kɔm o qto qɔ ki c| /
 i c^w< Ot0 Gxɛpɔ M²u u²i gugɔ hɔɾl^apɔqɔw u| qɔi^a/
 nɛvɛk jqi { o gi o wɛvɛ c| gi²u| xk²ɔgv0

Mku j^acm n³4³4^w uwtɛpɔwɔm gɔ gi {u| gttg
 eucm gɔ w³p^am^am^w gi { j c v m cu. v³ld go gɔvɔv
 2r Ā ɔgv co gɔɾ i²v c^wcp h²p{ | gɔ xqɔv dgtgɔ/
 f g| xg0 Ugj qɔ ugɔnk vɔɾl gugɔ nɛnɛvɛp0

Co kɔɔt Ot0 Gxɛpɔ i²vɛ euq^am[¶] | » vɔnkɔv/
 vgo gv. t³4³4^v p o gi cf vɛ t^a c x^aɔu| v0

ō G| n²tgo i c| f c u^a i k kɔɔɔɔ. c j qn c| cɔɔdgt/
 vɛ k hɔcm o gi vɔpɔj c v^a m c i c| f c u^a i k m^wv^av0
 J cv kɔ{gɔ kɔɔɔɔɔ m xcp c| qtu^ai dcp. xku| qɔv
 c| qɔdcp p³4³4^p f² n³4³4^m p g j g| gɔ vɔɾk j^atqo kɔɔ/
 kɔɔ

rftc k0 Cndgtw vctvqo^ap{i { rftug vj^av Ìi { jc/
v^atq|qw. jqi { o kpf gp gu vgpf dgp j^atqo kunq^an v
vctv hgpp. c o^aukm j^atqo rgfki Ìtgugp^an0 G| c|
gu vgpf c o k v^avgp²xÄpn0 C| kunq^andcp o quv
pkpeu vcp[¶]v u0

Co knqt gl gngv gm qpf qwc. ³pn²p { vgrpÄn
gu go dg lwqw c| qtu^aidcp o kpf gphgr² m>f qti »
u| gi²p { o ci {ctqm r cpcu| c0

ô P go wfwpm cpi qmw ô u[¶]vcm ô²u gl
o kpf gppgm c| qnc0 C|²tv ncr wpm r²p { gi gup nk/
ugdd o wned²tv. o kv c| cpi qmw o gtv c hct/
o gttgn pgo wfwpm dgu²rp0 O kn(gp o^au rppg.
jc pgo xqr^apm p²o cu^aitc n²tj q| vwx0 ô Co g/
tkndcp co kv i qpfqn c| go dgt. c| v nk ku u| qmc
o qpf cp0 Qf chqtf wnc0 Ot0Gxcpuj q| 0

ô P gngo gl gp c n²4p {²ngp n²ci fdd 472ô 522
jqphk²tuco xcp. ô o qpf qwco ô cnkm pgo wfw/
pcm cpi qmw²u gppgm j^av^ap {^av²t| kn0 Kw xcp
gi { gi²u| Ägu kunqr. pgo n²gvpg/g kw ngv cp/
i qmw vcp[¶]cpkA

Ot0Gxcpupcmh²reukncpvc u| go g0

ô Fgji { pgo. o k ku gttg v²4gm| Äpn# ô
nk^anqw nmgugp0 ô ³ppgm dk²vucp pci { qdd dg/
hq^auc xcp c j qphk²tuctc o kv pngo. v/
j gvp pgnkm ku gi { u|[¶]xgu²igv²u pgnÄm ku l »
xqrpc0 Jc ³4u| gl³p xgnÄm o qpf lc o gi pgnkm
jqi { lgrpvng| gpgm c wphqn{co tc0 Jc cpp { k
go dgt cnf. jqi {²tf go gu gi { vcp[¶]v hqi cf pk
Äi { hgn²vgrpÄn c o k n²4m²i Äpn²p hqi lwm kw vct/
vpl0 C o ci {ct o wpm^au pci { qp l>n²tv c h²4f/
o xgr²uj g|. ur gek^ancp c t²rcvgtog²uj g|. co k
kw pci { qp hqvqu0 P gmÄm pgo c| c|²tf gmÄm
jqi { o kpf gphgr² eucxctqi lqp. jcpgo c|. jqi {
ngvrgr gflgp²u o kv^ancpf » o wpm^au gn ugi[¶]ug c
vgtog²uj Jc dgu²rp wfw^apm gi { o^aucn uqm
o kpf gpv n²gvpg lqddcp grkp²| pl0 P^ancpm o kpf ki

eucm kf ul cnk o wpne xcp. co k c| ^ancpf» ngtg/
 ugv ul go r qpl^ad»n n¹tqu. fg c| ³4ul gu o wpn¹np^an
 c ngvgr gf gw o wpn¹uqnev gn p{dgp t²ul gu¹vg/
 p²pn⁰

Vgto ²ul gvugp o gi ¹2tvo. jqi { guv. co k
 nqt ³4ul gl³ppgm c o ci {ctqm o clf gndgu²ri g/
 v¹pm gtt n c v²o^at»r⁰ C| gn¹txwv o ci {ctqncm
 o gi ngm hqi pk o kpf gp ugi ¹v ng| gv co gn{gv hg/
 r¹lg p{¹vpcn⁰

M⁴dgp c| cw»pm grj ci {vc c| kunq¹v o gi c|
 kunqr n¹4¹Än pci {ul gt gp o gi o xgrv h³4f gngv ²u
 pgnk^ai wpm c t²rcvtÄrgvnpgn⁰ Kv r¹wco gn /
 ul ³4 Äi {pgxg| gw kki^anv h³4f gngv⁰ Gi ²ul Cndgtc
 tgwpgvgugp ul^atc|. Äi {jqi { ^ancwgp{²ul v²ugk
 n¹4¹Än gffki crki wf^acm o^au^acn hqi rcmq|pk⁰ Gttg
 nkcr¹n¹m jqi { c h³4f gv o guv²i gugp hqi l¹m
 vgt²ngpp{² xct^a|uqpk⁰ O kpf gphgr¹ ^atnqnev j Ä /
 cm co gn{gngv dxxg| gwgm c xgv²u n¹4²0 C xk gv
 c| w^ap jgn{gp¹pv h³4f w|cu| v^am ²u t^adqeu^av^am
 c| gi²ul xk²ntg⁰ C| ³p³4²upgm pci {ul gt o gi /
 qf^auc gl. co gn{ c| qpdcv uqm h¹tcf u^ai qv ki²p{gn
 vj^av pci {qp o gi ft^ai ¹lc o ci^av c h³4f gv ²u vgt/
 o²ul gvugp c vgtog¹uv ku⁰ K{gp kki^anv h³4f ^atc
 rgi cr¹dd ³4ul ³4 qn{cp pci {. o kv c⁰ o xgrv¹gp
 vgtÄrgvnr⁰ Kc|. jqi { jcuqpi¹cpk pgo rj gv ngv
 gi {o^auj q|⁰

C| cw»pm pci {ul gt gp o gi o xgrv ²u fÄcp
 h¹gv t²rch³4f gm n¹4³4v jcrfv gr⁰ O^at guvgrf gw.
 go dgtgn crki vcr¹mq| wpm eucm gi { o ci {ct i c| /
 f^atc dwncp wpm cnk nk²vngugp pgo vcmqt/
 ten jcpgo p{qre n»xcn gn¹xgn v³4vg c h³4f gv⁰ G|
 o²i ul | h³4f⁰ Hengv j wo wul hqtf wv nk c| gng/
 xcucmcr⁰

M⁴ÄndgnÄn jcv o ci {ct euc¹f fqi q| km ³p/
^am»cp. jcv o ci {ct euc¹fpcm xcp o^at gttghgr¹
 h³4f dktvnr⁰ O kv ²tf gnguu²i gv vcr¹p o gi rj gv

go n¹gpk jqi { c | gi { km o ci { ct h¹/f lg o gmgw
 tq| qi c xkm» tqunefq| kn0 Lcr^a pqm rmpcm dgppg.
 cnkm ul kpv² p kf gl³/wgm h¹/f gv v¹pk0 G| xqnv c |
 gi { gwgp lcr^a p hco ¶hc. co gn{ gv Mcpcf^a dcp
 h¹/f o xgr² uugnif wco hqi rcmq| pk0

C| cw»pm h¹/ncp{ctqf qw c ewnqti {^a tj q| ku0
 G| gt vppc ewnqt²r^av wf gi { pcr hgrf qri q| pk
 2u c i {^a t j^a tqo u^a | go dgtv hqi rcmq| wv0 U gr/
 vgo dgt 42/^a p ngl f fkm c| Ñ go 0 »u fgego dgtki
 wtv0 Dk qp{ eucm jgxgp³/w pcr c o wpcnf 0 C
 u| cn^o ^a p {/o wpcn^e ^a wnc kw ku o wcvnq| kn0 Cnk
 p^a tqp c h¹/f gngp f qri q| km tgp f u| gtpv c | ngt Ñ
 dg v² rktg c i {^a tcnlc. fg w{ cpcpp{ k o wpcn¹ uv
 dgpp c i {^a tdep hqi rcmq| wv¹pk o kpv co gpp{ k c
 p^a tqp pcr n¹4 dgp f qri q| qw. ul kpv n¹ r vgrpu² i 0

O kpv c hw»v | vgtlgf v gn jqi { »j c| ^a k xgpf² i
 2 tng| gw 2u P² o gf { I { wnc d^a v^a pm ngtv² dgp
 3/4 u| g ku i { ngm c o ci { ctqn0 Ngj gxgt v¹ pm c h dg
 2u o kpf gpnk nk^a tv nmg dcl^a v0 C uqm uqm gndg/
 u² r² ud n nkrcmwv gppgm c| Ñ o ci { ct vgrgr pgm
 o quvo ² i dk qp{ u| gi ² p { gu v¹4 v² pgv0

3; 47/dgp l³/wgm kfg gn u³4 c o ci { ctqn0
 Mgw u^a | 3/4 xgp/j^a tqo u^a | go dgt f qri q| qw c t² r c/
 h¹/f gngp. fg c v² rktg eucm jcwcp{ qre o ctf v
 xku| c0 G| gm n¹4 Ñ j^a tqo /p² i { eucn¹ f xgw h¹/f gv
 3; 48 wxcu^a p u^a | pgi { xgp Ñ go dgt l³/w 2u o clf/
 pgo o kpf gi { km n¹ x^a p fqt» j c l» j q| o ci ^a xcn
 qn{ cpqnev. cnkm kfg ki { gng| pgn0 Grkpv² ki gp uqm
 o ci { ctpcm qf cxgu| gw c h¹ gv² ug. o gtv gi { /n¹ v
 hco gt v¹4 pntgo gpv 2u g| gm c o wpcn¹ uqm h¹ gv² u² /
 xgn ku cf »uqm o ctf wv0 C o ci { ctqm o quv o^a t
 u| gtxg| ngl pgm 2u Ñ { gppgm cttc. jqi { eucm o gi /
 d¶ j cw» o wpcnf »j q| ngt Ñ dgp gn0

O kpf gpgugt g pci { gtgf o² p { o^a t c| ku. jqi {
 v¹ gp n¹ v vgrgr gu ku xcp c x^a tqudcp0 G| gm c| crc/
 r¶ m 2u g² tv w¹ p ² tf go gu c pgx Ñ gv ku h¹/f g/

i {g|pk0 *Unkdc* L³pqu. *Hwl»* Kwx^ap. *D²rkpv* Oknⁱ
 n»u. *V»y* Kwx^ap. *I {3/4i {* L³pqu. *Mw{c* Kwx^ap.
I c/fci Hgtgpe. *V⁹b^at* R²vgt. *Pci {* D²rc. *Dcm^lp*
 D²rc²u *Ocv{km»* Okj^an{ Tc{o qpf gnu o ci {ct
 vgrgr gugk0

m ner^vm hgn rgi lqddcp c|v c| ^{3/4}rgvgv. jqi {
 c| cpiqn kunqⁱv o gi ngnm euk^arp^k c o ci {ctqm
 ul^ao^atc. fg ngnmugf vgm²tv^g c o ci^apqu go dg/
 tgm ku. cnkm Oci {ctqtul^ai o kpf gp v³l^at»n xgt f/
 vgm^{3/4}ul g0

O kpf gpnk h^{3/4}f gv cnet ul gtgl pk fg gi {gn tg
 gl o²i pgj gl gp o gi {0 Crki xcp xcrcnk cnk pgo
 cf»ulⁱicn l^{3/4}w nk0 G|gm c ngtgugv³mpgm rgi pc/
 i {qdd t²ul²v jc|cn³f km v^{3/4}rgul vgl0 Cnk^m rgvgr/
 rgfpgm c|qm jc o^aunⁱr pgo. rgi cⁱdd d²tdg
 o²i ku eucm nkj cteq^rpcm o ci w^rpcm gi { nku h^{3/4}
 fg0 Uqtuwm pgo n³pp{ . dk qp{ pci {qp ngnm n³/
 f gpkc o kpf gppcr ko gi²nj g²u²t0

¶ { crcmwn gi { o ci {ct vgrgr. co gn{ vcrⁱp
 gi {nqt o²i pci { ul gtgr gv hqi l^aw|cpk c n^rpc/
 fck o ci {ctuⁱ v^{3/4}v²pgv²dgp0 C hgn f²u o c o²i
 eucm c i {gto gnek kv nqr vlc0 Gi {gn tg eucm
 v³gnⁱv^ancpf» n^m. gl rgu| c|qpdc^r c v^{3/4}|u.
 co gn{ n^{3/4}anc o ci {ct vgrgr h^{3/4}r³0

Dk qp{qu o gi jcw^fa ucn An³pm hgn c xqpcvc
²u tqj cpw^rpm xku|c Ngj dtkfi g hgr²0 C| Au²rgp
 gi {/nⁱv p{An p²|gw h^{3/4}n t^apm²u o²i c xqpcv ugo
 kⁱcwc0 Gtghr² pgo ul gtgvkm c p{An j Au³v. pgo
 ku pci {qp d^apv^am gl²tv pgo tlc^fpcm ugo o kv r0
 Uknⁱpi dgp r^kj gpv³pm o gi gi { rkn^rpcvc. cj qp/
 pcp ul^atp{ xqpcn xgl gv *Okm kxgtdg*. co gn{ o^at
 t²ik o ci {ct vgrgr. kv fqri q|km *M^rquul^at* L³pqu.
 cnk cpiqn vep³pcm xcp nku|go grxg Tc{o qpf dc¶
 Pgxgl vgvugd^d hco ¶³k³m c| kl³A²u kf ugdd *Uctnc*
 I {3/4i {. *Dcrqij* Kwx^ap. \wdgm Hgtgpe. *Qdclv* Hg/
 t²gpe euc^rflc²u c| Qtquc/hco ¶³lc0 M^{3/4}AndgnAn

j Àu| o ci {ct hcto gt xcp g|gp c n̄4p{²ngp u
gi {kn̄o^a ukm dktvqnc o^at gi²u|gp c| Gi {gu^ñ /
f mco qmj cv̄^a t^a ki j À »f kmrg0

Ugtr̄ipi d n h̄3/4nḡ? o^at c d^ap{cxkf²m ng|f /
f kn̄0 K̄v ku uqm o ci {ct xcp gn| »txc0 O^au xkf²m
o^au² rgwku| qp{qm o^au dqrf qi w̄^a uk ngj gv u²i gn̄0

C n̄pcf cko ci {ct d^ap{^a u| qmn̄3/4 3/4v

*Ngj dtkf i g. *ô ð*

C| gi {gv̄gp pci { n̄pcf ck o ci {ct d^ap{c/
v̄ngr0 J q| |^a v̄j gv̄^ñ i {qtucp. j qi { go gm̄w
gi {kn̄g c ngi t²i kdd o ci {ct rgv̄ngr ^ñugmpgm
o gtv j ku| gp jcto kpe/pgi {xgp²xg r̄n̄pcm kw
o ci {ctqn̄0

O ci c c x^atqu pgo eucm n̄pcf ck² tv̄rgo dgp
xgw x^atqu. jcpgo p^an̄pm ku cppcm j ^ñkp^an̄0 M̄4
t̄Andgn̄^ñ o gl x^atqu ngj gvp̄g c Pci {ctf̄4f u²r̄p0
K̄c| k d^ap{cv̄ngr. cj qx^a dgj À »f pcm c| go dgtgm
²u cj qppcp cw̄»m̄en tqdq̄i pcm nk c o w̄p̄nc/
j gn̄{gn̄tg0 Pgo eucm o ci^a dcp c x^atqudcp. jcpgo c
n̄4p{²ngp ku r̄n̄pcm o ci {ctqm o²i r̄gf ki Eqcn̄
j w̄t̄udcp. Vcdgtgp. Ftwo jgn̄tḡp²u c| crt»dd
h̄r̄k̄endcp gn| »t̄v̄p. fg c|²tv̄ r̄r̄gn̄dgp kf gv̄ctv̄| /
pcm mku ngj kdtkf i gko ci {ctqn̄0

C x^atqu gi {^anci^adcp c d^ap{^au|^ai n̄4 /
r̄qpv̄lc0 Xc̄r̄o k pci { o ^ñnc̄ pl̄peu. fg pgo ku ng/
j gv. j ku| gp pgo t²i kdgp ^ñAppgr gn̄²m o gi cr̄r̄ ^ñu^a /
pcm j Àu| gu| v̄gp̄f u² xh̄q̄tf w̄»l^a ð C| gn w ku xq̄ncm
kw j^a| cm fg cm̄qt Ngj dtkf i g pgo xq̄v x^atqu.
jcpgo eucm qn̄{cp nku h̄cn̄w o k̄pv c v̄3/ddk̄0 Oquv
c| q̄pdcp u² rgugm o^at c| wee^ak xkn̄p{qu h̄p{ /
u| »t̄»m̄en ki c| ^ñl^am c| cw̄»h̄q̄ti cm̄ cv Gttg w̄i {cp
o²i pgo xq̄pc u| ^ñAm̄²i. fg o clf ngul ô o q̄pf /
l^am d̄Au| n̄p. ô o gtv c x^atqu h̄gn̄ f²u²dgp o k̄p/

f gpnk j ku 0 C u l²p o²i o c ku pci { À. uqm go /
dgtpgm wf ngr {gtgv cf pk uqm go dgtv wf o ci^a /
j q| xqpl epk o lpxcxco ko^a i pgu0

C u l²rgu^a mpo^a uqp o^a t o ci {ct u l » Æk o gi
c h^ÀÀp^Àngv. Gi {/n^Àv m^Àu^an^À go dgt²tngl gw o gi
o wⁿv ngtgupk o^auqm xqpcvc Æp^Àgm j qi {
o^auww rt»d^arlcpcm u lgtgpeu²v0 C o ci {ct x^ap/
f qto cfctcmx²i ki n^Àl²tpgmgi²u l wco qp0

Gi { nku rqtvgpi gtgp ngtgu l^vÀn dg²tngl Æpm c|
gnu rctn^Àc. co gn^Àgv P {wi cvMcpf^adcp vⁿÀ n^À
vco 0 J gn^Àgu nku rcxkn^Àpp c n^À4 gr²p. o lpf gphgr²
À f g xk^a i qmd»n^Àpi cvpcn0

C rctm x²i²p o ci c c x^atqu n^Àgi h^Àti cm cudd
t²u l g0 Hgrj n^Àteqⁿ o²i ki c l^ap pl^Àpeu N^Àgv dtkf i g/
dgp. fg j^atqo /. p²i {/. 3^Àgo gr^Àgvu n^Àg f xgu nku j^a| k^À
m^Àm cⁿÀ f pcm gr^Ài uqm c| À r^Àgv²u r^Àv j cv^Àri
2^Àr^Àpmc h^Àti cmqo 0

Xcp kw xcrcok co k^Àtv c n^Àepcfckm ku k^Àki {/
nkm c| cndgtvclⁿv0 Cndgt^vdcp u³4euctpqn^Àqm xcp/
pcm cj qn o lpf gpnk n^Àgi v j gk o ci^av²u u l qo l^av c
l²i j kf gi n^Àepcfck u³4tgr0 f n^Àl^À»ri kuvpk pgf gl.
fg pg jctci w l^Àpcm t^ao c n^Àepcfckm dk qp {
pgo o ci wⁿh^Àlc i {qo t^À go dgtgn^Àgm vⁿÀ n^Àm
nk cn^Àgv c l^À» o ci {ct²u p²o gv u³43^Àm gn^À /
p {gl vgwⁿ0

F² rgr² tngl^v Æpm o gi. co kn^Àgt o lpf gp o w/
n^Àu go dgt f qn i q| km²u gl²tv nk^ÀÀ^v Æpm c u l^a n^Àqf c
gr² dgu l²ri gv^À0 C uctn^Àpp h³4v pv gi { euqrqt^v0
M^Àcn^Àl^au dclw^Àqm r³4i g n^Àer. l^Àgm^À | gv^Àu o c/
i {ct tw^am gl gm eucm o ci {ctqm n^Àgi gv^Àgn0 Xcⁿ /
dcp À i {ku xqn0 J q| l^apm euc^À»f^vcm r^Àpcu l^Àqf /
v^Àm j qi { pl^Àpeu o wⁿ. o gi j qi { n^Àgxg^Àgv cⁿÀ /
pcm h^Àgv^Àpk c h^Àto g^Àgm cn^Àkm h³4n cⁿÀ l^am n^Àgv
h^Ài cf p^À0

Gi {u l gttg eucm gi { vci dcu cⁿÀ f v go dgt^a n^À

nqw o gi o $\frac{3}{4}$ $\frac{3}{4}$ \tilde{A} pm 2 u jcmi cwc c dgu 2 ni gv 2 uv
 Pgo uqni t c w \gg r t vg c h \tilde{c} v \tilde{c} r \tilde{c} ddkm cnk n n 2 u dd
 nk \tilde{g} t \tilde{A} v. jqi { c h \tilde{c} 2 u xc \tilde{c} o k h \tilde{m} teuc u \tilde{g} tu a o qv
 j \tilde{q} l \tilde{q} w o ci a xc \tilde{r} o —i { v \tilde{g} u \tilde{g} w o k \tilde{p} v \tilde{c} t \tilde{g} r \tilde{A} ni 2 r/
 u a tp{cm ngpp 2 pgm r \tilde{g} f \tilde{k} i eucm c eu 2 r \tilde{n} i 2 r gi {gu
 t 2 u \tilde{g} k xq \tilde{m} cn \tilde{c} o Gi {k \tilde{f} g \tilde{k} i jcmi c \tilde{w} 3 m c| \tilde{A} l \tilde{q} peqm gr/
 dgu 2 r \tilde{f} ug \tilde{v} . c| w 3 p n 2 $\frac{3}{4}$ dg x \tilde{g} v \tilde{g} wgm gi {/n 2 v o qp/
 f \tilde{c} v \tilde{q} v. co gn{d n r 2 u \tilde{q} l \tilde{q} w. jqi { t 2 i gddk n \tilde{e} pc \tilde{f} a uqm
 m kuo g \tilde{k} m c jgn{|g \tilde{v} \tilde{c} o J co ct \tilde{q} ucp h \tilde{e} h \tilde{f} v 2 m k \tilde{p} /
 n \tilde{q} i pk \gg l \tilde{w} n \tilde{e} v \tilde{c} o X \tilde{g} r \tilde{g} l \tilde{v} k d a euk t 2 i k o ci {ct n \tilde{e} pc \tilde{f} a u
 l $\frac{3}{4}$ v dg c x a t \tilde{q} udc c h \tilde{c} to l a t \gg n x a t a t \tilde{q} mpk c h \tilde{k} x \tilde{c} n
 R \tilde{k} u 3 x \tilde{c} n cnk o a t kw u \tilde{A} ng \tilde{v} w 2 u d \tilde{k} q \tilde{p} { k \tilde{p} n \tilde{f} dd
 U \tilde{g} x \tilde{g} p 2 xt \tilde{g} jcmi c \tilde{v} . fg c| 2 tv qn{cp l \gg n w \tilde{f} o c/
 i {ct \tilde{v} n o k \tilde{p} v \tilde{c} u \tilde{q} j \tilde{c} ug n \tilde{g} t \tilde{A} v x \tilde{q} r \tilde{p} c gn c|
 \gg j c| a d \gg n \tilde{c} o

Co kn \tilde{q} t c| $\frac{3}{4}$ gi n \tilde{e} pc \tilde{f} a u o gi jcm \tilde{q} wc. jqi {
 eucm c| gu 2 t \tilde{g} x a t \tilde{w} pm co \tilde{q} i c o ci {ct \tilde{q} m c o w \tilde{p} /
 n \tilde{f} d \gg n j c|cn \tilde{g} t \tilde{A} v \tilde{p} gm h $\frac{3}{4}$ v 3 o c \tilde{f} v dgpp \tilde{g} c o ci {ct
 x \tilde{g} p \tilde{f} 2 i u \tilde{g} t \tilde{g} v \tilde{v} . o gi $\frac{3}{4}$ gnv o k \tilde{p} ngv 2 u x \tilde{k} w ku o a t
 c| cw \gg l \tilde{w} m \tilde{h} gr 2 o

ô K \tilde{v} x \tilde{c} p n 2 $\frac{3}{4}$ gn \tilde{d} gp c h \tilde{c} to qo ô o gu 2 ng \tilde{c} o ô
 F \tilde{g} j \tilde{q} i { g \tilde{p} i \tilde{g} f \tilde{g} o gn c| w \tilde{c} n \tilde{e} v \tilde{c} O gi ngm r 2 vp \tilde{k} qm
 c n \tilde{k} u d \tilde{k} t \tilde{v} q \tilde{n} o c \tilde{v} . r \tilde{g} i c \tilde{r} \tilde{f} dd n \tilde{e} r \tilde{p} cm gi { n \tilde{k} u j c|ck
 2 v \tilde{g} m \tilde{c} o

Pgo ku 2 t \tilde{v} \tilde{A} pm t a v \tilde{m} cn \tilde{q} |pk U \tilde{g} x \tilde{g} o a t j c|/
 v \tilde{q} wc ku c i 2 r \tilde{g} v. gr \tilde{c} t \tilde{c} f \tilde{v} cm c j a |cm 2 u c| w 3 p
 c n \tilde{k} 2 i \tilde{g} w c \tilde{n} l \tilde{g} t \tilde{v} ck h $\frac{3}{4}$ f \tilde{g} ng \tilde{p} o g \tilde{p} v \tilde{A} pm n \tilde{g} t \tilde{g} u \tilde{A} r \tilde{c} o
 O 2 i |g \tilde{p} 2 pm ku x \tilde{q} n \tilde{c} o C h \tilde{c} v \tilde{c} n X \tilde{g} r \tilde{g} l \tilde{v} k c \tilde{p} i qn 2 u o c/
 i {ct p \gg v 3 k \tilde{m} v h \tilde{A} v{ $\frac{3}{4}$ m c \tilde{q} i { k \tilde{i} c|k o ci {ct n \tilde{e} pc/
 f \tilde{c} k \tilde{j} q| k \tilde{r} k \tilde{n} o J a t \tilde{q} o p \tilde{g} i {g \tilde{f} \gg t \tilde{c} k cw \gg | a u w 3 p
 o gi 2 t \tilde{m} l \tilde{v} \tilde{A} pm c| gn \tilde{u} o ci {ct n \tilde{e} pc \tilde{f} ck h \tilde{c} to j \tilde{q} l.
 co gn{g \tilde{v} \tilde{r} \tilde{w} co o

X \tilde{g} r \tilde{g} l \tilde{v} k d a euk \tilde{A} i {p \tilde{g} x \tilde{g} |g \tilde{w} k \tilde{k} i a m. xci {ku o gu/
 v \tilde{g} tu 2 i g \tilde{u} gp $\frac{3}{4}$ p $\frac{3}{4}$ $\frac{3}{4}$ v h $\frac{3}{4}$ f \tilde{g} v o x \tilde{g} r \tilde{c} o C j a |c \tilde{v} 3 l 2 n \tilde{e}
 p \tilde{c} i {q \tilde{p} n \tilde{g} f \tilde{x} g \tilde{u} . o ci {ct c \tilde{r} $\frac{3}{4}$ f \tilde{k} i c|f \tilde{c} u 3 it \tilde{c} go r 2 /

ng|vg0 Nqorqu mw{c tqjcpv hgrfpm Xgrglvk p²pk
 hqjcfqw c| clw»dcp pci { 3/4³o gn ²u dgxkw c
 u|²r u|qd^adc. c| gd²fn dg u c n³/xgvng| rkmrpev/
 dcp o^at h|³/w ku o kpfgpv. co kv eucm ngj gvgw. u³/
 v³/w ku co Æi { l» o ci {ctqucp. o gtv jku|gp c o gu|/
 u|kt n l³/w xgpf²i pgm o gi ngm o wcvpk jqi { pqo
 hgrglvgwg gnc| qwj qpt»nj q|qw wwf qo^ap{^av0

Ok o²i n³/4 Æi^atwm gi { nleukv c ic|fcu^aiqv.
 Xgrglvk d^aeuk fku|p»v jk|rcn gi { n³/4 p gmg|^algw
 jgn|gp p{qre nqec. o^auww rfgki jgvgp u³Æi^a0
 Vk gpp²i { n»xcn ic|f^amqfkm xcp vj gpg ku l»p²/
 j^ap{0 Mku² rllgdd gi { nku ». cjqn c nœu^am ²u
 nk^am³u| n³ipcn0

C l³/4 flgp o^alwu 46/²p xgvwgm ²u v³ j²v
 o Ækx xqiv c| ctcv^au0 Kw t³/4 kf kfgi ²n c vgt²/
 u|gv.fggl kf crwgt ugp²r0

C j^a|kuu|qp{ d³u|ngu²ig c xvg²p{gu ngt0
 Xcp dedlc. |³/4 dqt»lc. wdqtn³lc. jci {o^alc.
 o kpfpgg. pgo ku ki gp wfqo hguqtqrpku v o²i
 fqj^ap{ ku. co kpgm vgt²gu|v²ug kw o²i pgo vkqu0
 C| cuu|qp{ h ngi c|cn fleugn|km jqi { c l³/4 l²p
 o²i c flpp{g ku o gi vgtgo 0 Kc|. pgo u|cdcf gthg/
 rglvpk jqi { o guvgtu²i gupg ³/p v³/4 ³/w vgt³ngv n
 xcp u|». co k pgo pci {qp qre»0 Gi { cetg w³p
 jcto kpep²i { ²xtg ³/4 xgp fqm³tv ngm hk gypk eucm c
 x³l²tv. co k²tv kfgxgl g³kn0 Jc glv pgo^arfq|p^a.
 Æi { dk qp{ c nk²i gw l³/4 dgp pgo vgtgo pg o gi
 ugo o k0Crdgtv ki c|^ap pgo Ucu³vuj gy cp0

O²i c|w³p c|cn o wrcwpm jqi { dg^an³qv/
 vm dgpp³ngv c o ci cu d³ Æ^adc ²u c h³vcn Xgrglvk
 nghvqi tcl^an0 M³/4 dgp o^at u|crlvqwc m ²tv³pm
 jqi { n³u|gp xcp c o ci {ctqu gd²f0 Ok vici f^au
 dgppg. dk qp{ qn{cp o guu|ktg Oci {ctqtu^ai »n gl
 pgo nku u|gp|^aek0

Xgrglvk d^aeukxcn c|w³p jquu|cucp grdgu|²r/

i gwgpk c| kwgpk xku| qp{qnt»n 2u c hcto gtgk k n0
 P go rcpcl nqf qw. fg pgo ku fleugnfgw0 Pci {qp
 tqul gu| vpf gk xqncm fg cnefvcm l»m ku0 O gi i c| /
 fci qf pk o 2i pgo wfqw. fg c h^axcn c eucifl^a /
 xcn xcnj qi { o kpf ki o gi 2n0 O^at xqrv xcrcu leu/
 n²lg. fg c tqul 2xgm o kpf gpv grkkgw0 C| kf gk
 vto 2ud n pci {qp uqnev x^atv0 Gro qpf qvc n²pn /
 f^auckv cdd»n c| kf d n co knqt nk³/₄v »u dk qp {
 u| kf v gi { nleukv c| À dgx^a pf qtn»nev0 Gi {u| gttg
 pci {qp uqnev cnetpcm 2u o kpf gi {km o kpf gp egp/
 vgv j c| cm²af. o gtv vtv| km j ku| gp cf »u^a itc l³/₄v
 n0 | rrgp gl²tv o kpf ki eucm o wpn²u o ctcf. cp/
 pcm r g f ki p k p e u l³/₄ lg0 C u| c n^a p { / o w p n e
 wi {cpku qn{cp. j qi { c v²vgp perqm c f qri qu perq/
 nev h³/₄gu| kn0 U| gtlpvg ku eucm c| c o wpn²u go dgt
 dqrf qi wn cnk c nkugdd d²ttgn ku. fg ^ancpf » o wp/
 n²upcmul gi f kmgnxcrcu gn| kmhcto tc0

Xgu| gf gm gupp n²/₄grfgw c| gvg. kpf w p w p m
 ngnw xku| chg²0 J kj gvgv i {qtucp 2tv²pm xku| c
 c x^atquc u c| w²p gi { jcxrcu cu v²tg^av
 x^aixc. ctte c t²u| tg 2tv²pm cjqn c o ci {ctqm
 rnp^an0 Mku. crt» j^a|cm xcrcu gpp{k h^ad»n fg
 o kpf gphgn n kpvi gvgw c o wun²vk 2u o^au kuo gt u
 xk^ai qn0 O kpf gp²Aw o gi ngj gv kuo gtpk c| v c j g/
 n²gv. cj qno ci {ctqm rnp^acn0

Vco o k Cpft^auv ngtguv²Am hgn c o ci {ct d^ap{^a/
 u| qm gp³/₄n²v. cnk gi {kng c ngt²i kdd vgrgr gugnpn0
 Kv hqn{vcpk ngnw qw. cjqn cddeji c {wn0 Gn /
 ngt²Av c u³/₄ 2u c| w²p o gi gtgv c dgu²ni gv²u c
 t²i kf qri qnt»n0

Ngj dtki gdgp n²/₄Ädgn²Än j gvgp³/₄ o ci {ct
 eucif xcp. c n²/₄p{²ngp u²vul »txc o 2i ngti cr²dd
 v²gp³/₄. Fkco cpvkv{dgp o 2i n²/₄Ädgn²Än j Äu| o c /
 i {ct hco h²co O clf pgo xcrcu gpp{k c d^ap{^ad»n
 2n fg xcp²cm qn{cpqmku. cnk hcto gtqunqf p²cn0

G| c o ci {ct vgrgr Äi { ngnvngl gw. j qi { c

r gppu{rkcplck *Gi {gu[~]Äw/f mco qm+ d^ap{^andcp j ct/
o kpe/j cto kpe^{3/4} 2xxgn gl gn w ki gp i {cniqtkcm xqn/
vcm c ul v^alnqn0 C o ci {ctqm o gi wv²m c uqm
j gteg/j wte^av 2u p²j^ap{cp^av^{3/4}wgn0 C| gnu vgrgr Ä/
n m gi {knq xqrv T^awck Hgtgpe. cnk j cto kpe^{3/4} 2xxgn
gl gn w l^{3/4}w Ngvj dtkfi gdg. E/cm» O kj^an{ vcr²p o²i
t²i gddgp. fg jco ct o gi jcnx c| ^{3/4}xgi {²v Ngpi {gn
L^apqu xgwg gr0 Cniqt ngt[~]Äw kfg Rcrr L>| ugh ku.
cnk ul kpv² o gi jcnx fg htc o²i kv fqri q| kn0 Mqx^aeu
L>| ugh cniqt kdc p ul kpv²p kw fqri q| qw. n²u dd
c| qpdc p gm^{3/4}n^{3/4}n^{3/4} V»y L^apqu ^{3/4}eu²xgn l^{3/4}w.
fg o ci c o^at o gi jcn0

Oci c Vco ok Cpft^au d^av^apm j cto kpen²v
2xg xcp kw 2u nk wf p^a o²i/ o kpf c| v c uqm fgt²m
d^ap{^aul v gniqtqpk cnkm kw Ä^{3/4}w²m hgn c vep{^alw/
nev Ngi kn²dd CdcÄd»n \ go r²p xci { Dqtuqf
o gi {²d n l^{3/4}wgn0 Xcico gpp{k kuo gtvg gi {o^auv.
gi {knj kvc c o^auknev0

C o ci {ct vgrgr c| w²p nuucp/nuucp gt u^{3/4}
f^{3/4}w0 Gttghr² c o ci {ctqm pgo ki gp xgu gn²vgm
u v v²o qi cw²m gi {o^au0 Oc o^at l»n o gi ul gtxg/
| gw gi {gu[~]ÄgvÄm xcp. co gn{ 373 vci cn fleugn²f/
jgvkn0 Xcp nÄ²p jgn{k²i Äm cj qn hgn²rcu^auqnev.
ul k²gn cf^auqnev. o wcv²i qnev ul qncm vcvp²k0
C| gi {gu[~]Ävpgm o quv xqrv c jwul qp^{3/4}2 xgu lwdk/
ngwo c. co gn{gv l²p{gu Äppgr u²i gm ngtg²dgp Ä/
vgm o gi 0 Co k o k o kpf gtt n dgu²ni gwÄpm c|
gp^{3/4}m gn ku kpf k²qw xcrcnk j qi { ul gflg ^{3/4}u| g c
vci qnev. co k pgo o gi { xcico k n²pp{gp c pci {/
nkvtlg²u x^atqudcp. vg^av cffki n^{3/4}Äp²| vÄpm
gi { n²ekvc Ek{dgp0

J co ctqucp ^{3/4}u| gcn²fwpm Cpftgl²xleu t²i k
gp^{3/4}mgn 2u U| ctnc L>| ughgn cnkm ul kpv²p pgo
o ck i {gtgnm m xqncm c o^auqf km i gpgt^aek» g| gp
c l^{3/4}f^{3/4}p0 O kpf c ngw v²ddu^{3/4} xqrv o^at c|
Gi {gu[~]Äw/f mco qndcp. fg c| w²p Ätc eucm xku| c/

j Ì »fvc m kv xqncm c|qm cnkmgn gi { Ìw ng|fvgn
 gi { Ìw m Ì f^{3/4}vgn²u c|v ugo hgn|vgn²m gn jqi {
 co kv ^{3/4}u|g wfvc m mwrqti cvpk c|v gi { Ìw u|g/
 tg|v²n0

C o ci {ct gi {rgv jgn{k²i g jqu| Ì pci { j q/
 f^an|. gpi go gv gi {gpgup c u|p^rcf^tc Ìngvgn0
 Pgo uqnev n²tf|vgn jcpgo gi {u|gt gp t^aorc/
 tpeuqncm jqi { dgu²ngm ctt>n co k qvjqp xcp0
 Pgo u|»pqnupk l^{3/4}vgo kfg. fg o gi jcvqwg|gnpgm
 c| gi {u|gt fgt²m go dgtgnpgm²tfgm f²ug0 Kc/
 |^ap hⁱ {gm gup jcmi cvcm²u c|w^ap o gi kpf wv
 c xkc. co gn{d n wrc|f qpn²rrgp c| jgn{|gv Ìm
 fgo dqtqf qwnk0

l d^ap{^au| g|gp c n²4p{²ngp pgo nerjcv o^at
 cmcm c|^au0 Xcp Ìi {. jqi { gi { j²vgn jcv pcrqv.
^{3/4} per fqi q|pcm fg xqiv Ìi {ku. jqi { n²v j²vdgp
 eucm gi { pcrq0 C| gm Ìv kf u|cnlcp u^a|^{3/4}xgp
 o wneper xqiv co k o kpf gpgugt g pgo èqn0 C ng/
 tgugv p²i { fqn²t jw|qp^{3/4}v n ^{3/4} fqn²t p{qrexcp/
 ngw ki pcrqpn²p0 G| c ngtgugv l> xqipc c| Ì dg/
 x^apf qtn>pcm fg g|vpgo nerlc o gi 0

C| Ì dgx^apf qtn>npcm pgo uqnev ¶²tpgm u v
 xqncm qn{cpqm ku. cnkm c|v jcpiq|cv^am jqi {
 rgi lqdd xqipc o^at v²ddgv dg ug gpi gfpk0 C d^ap{c
 o quv pgo hgn f²un²rgu. c n²4p{²m r g f ki pgo wf
 uqm o g|ic|fcu^aik o wpm^auv hgn|kr c pcvpk0 C|
^{3/4}gi gmpgm pgo c dgx^apf qtn>m gngp. jcpgo c pci {
 ki²p{gu^ai Ìm o kcv xqiv nkhq^auwn0 C hcvn dg/
 x^apf qtn>m u|gtkpv Ìm eucm rcpcu|nqf pk wfpcm
 pkpeugp o gi c|c| gngp^am>n²rgu²i Ìm co k pg/
 nkm xqn0 C nku p²m Ìv²ugm ku o gi v²4km ngv. o ¶
 m c pci { o girt>d^ancv²uqncm ku gngpv wfvc m
^ancpl0 C o ci {ct gi {rgv tgpi gvi kfv²xgv²u kv
 n|pn>fqwgo dgtgp ugi ¶vgn0

C hqvqu²ngvdx^ai» n²tf²ugm h^{3/4}v²vk xkc cf/

fki j Ì »fqw. o²i nggugw c| guv⁰ O kpf gpnk n²u Ì
 nf^{3/4}w j|c c eucn¹f¹a j q| 0 C o k xqpcwpm ku o^at
 qw rt¹u n^{3/4}v c r^an{cwf xctq⁰ —n^{3/4}dgp o²i ng
 ngngw ³d¹f¹gpk c rqtv c vqtmwpm²»n c d^ap^au| km
 gi {gu¹ng²dgp. co gn{pgm lqic xcp kcn^v o²tp⁰ K^v
 ku eucm o ci {ct u| »v jcm¹wpm o ci {ct xq^v c nk/
 u| qn^a n¹u. o ci {ct u| {x¹gn¹p^a n¹mc jcd| » kcn⁰

O quv o^at U| ctne d^av^apm xkw c| cw¹l^ap
 o gtv c Xgrgl¹v²ngm j|c c ngngw o gppk c v/
 p^atc⁰ M¹dgp gi { nku l¹ku¹v tg dghwqw o²i
 xgn¹pm c o quv dgtgpf g| gw ncn¹uckc ku 0 C| C¹u| qp{
 n²u {gwg c jcto cf km xci { pgi {gf km xceuq^av.
 o^at ki c^ap pgo ku wf wn⁰ M¹dgp o gi p²| v¹m c
 j^a| cvgrl²v nx²i ki 0

C| gi {km u| qdc o gngw gro gpv¹pm U| ctne d^a/
 v^apm pgo p{kkwc nk c| clv¹0 O knqt xku| chg¹
 ki {gng¹v¹pm o ci {ct u| »v jcm¹wco c euwn¹qw cl^v
 o ^{3/4}À⁰ P²j^ap{ r¹kn¹pcv o À¹kc c v¹kn¹cvqu kf g/
 i gpgm ku qw xqncm n^{3/4}^{3/4}v¹pm⁰ M¹v o ci^ap{qu x^ap/
 fqto cf^at n²v Ì o ci {ct nk^apf qtn¹. cnk o quv
 rt²d^arlc c u| gtgpeu²v 0 C| ^{3/4}gi gm u^atp{wm c¹
 n¹v¹m o kv c v{À¹m gn²xgn{gf euk²l²v 0 M¹k wflc
 o gpp{k n¹pn¹f^au. o gpp{k i {^{3/4}t f²u x^at o²i t^a/
 lwm nk wflc ukgt¹ng pgnkm Ì j c^adcp. Ì gi /
 | ku v¹pek^a vdk¹qu¹cpk⁰

Tkn¹p ngt¹À¹n kf g o ci {ct go dgt c| »j c^ad¹n
 g| o gi n¹w| qw c o gngi hqi cf w^vuq⁰ P gi g| gp ²t/
 v¹m gn c r^an{cwf xct⁰ C j cvm¹cu i | ^{3/4}u c| w¹p
 pgnk kco qf qw. t^ahwqw ctte c jquu| Ì xkcf wntc.
 co gn{ c pci { u| ²po gf gpe²v {x¹grk^av 0 Eucm c| v ucl/
 p^anwm jqi { c| ²lu| cne u^{3/4}²v²dgp pgo wf wpm
 ngpf v m¹dqi w¹pk c o guu| k kf gi gpdg u| cn¹f v o c/
 i {ct d^ap^au| qn¹pcm

C pci { j excuqmcn^a p*Eci ct{. * 0*

Qn{cp. o kpv Ucn{dwti xci { Kpudtwem gn n
o ci c c n[~]ngv x^atqu. j^awn c o ci cu j gi {gm c
j excuqm xci { cj qi { kw j[~]xl^a m Tqenku/gn⁰ Kfg v»/
f wpcm p{^atqp c nēpcfck i c| fci qn⁰ Kppg xku| c|
Àv Dcphlc. co gn{ c nēi h²p{ | ddgp dgtgp f| gw
Àf Àn j gn{g gppgmc| qtu^ai pcn⁰

Eci ct{ o ci c pgo nēuk x^atqu. ^ao d^at j Àu|
²xxgn g| gn w o ²i eum j^atqo g| gt go dgt ngtgugw
kw o gpgf²ngv⁰ Oc o^at j gwpgp{qreg| gt c rncuq
²u c vx^addk hgn f²ug ku dk vqu[~]xc xcp⁰ C n²v hq/
n{co c Dqy ²u c| Gndqy kw gi {gu[~]À⁰ C| ¶ { cr/
mwv h²nu| ki gvpp xcp c| gn ngn x^atqupgi {gf.
o kpvj c c| gi²u| nēukdgp Pgy {qtnpcm Ocpj cwcp
u| ki gv²v^wpq| p^a0

Oci c c x^atqu hgnx²ug i {³/₄ rcpqt^ao^av
p{À^v⁰ O kpf gp kf gi gpv hgnku| pgm c x^atquv n²4p{²/
ng| f qo dqm gi {kn²tg ²u qppcp o kpv xcrcok grg/
xgp v²tn²r v[~]Ap³/₄mkm c x^atqu⁰ Qn{cp o kpvj c Àu| pc
c| g| Àu²/₄u hgn{co x[~]dgp. vñ²p vx^add ku tqj c ppc.
j c c j kfc m gt u nēreuqm²pv pgo hqi p^am xku| c
c h²4f gv⁰

Co gtn²dcp c i {qtuc^ai qv ugj qn ugo xgvkm
o gi. fg vñ²p gi {km nēpcfck x^atqu ugo hgn f³/₄v
qn{cp j k²vrgp. o kpv Eci ct{0 M²/₄xgvrgp[~]Àn c j^a/
dqtÀ gn w j k²vrgp gn²l²gv c ppcm c j[~]fg. j qi {
Eci ct{dcp ²u c⁰ n²4p{²n²p qrcv. rgt»rgwo qv
vñ²nem ²u c| gi²u| h²4f vgt²u| gk nēpeugmgn xc=
vrg⁰ Gi {u| gttg gmgr²m c x^atquv c vrgm[~]À {p³/₄n²/₄n⁰
C u^aunc^at^au pgo nēj gv qn{cp o gi ugo o ku[~]v. o kpv
g| gnp gm c tqj co c xqn⁰ Gi {u| gttg o gi vgn c ng/
xgi c| | cn j qi { Eci ct{ c l³/₄ x^atquc⁰ O kpf gp
qrllhqt^autc m[~]2/₄p t²u| x²p{^atuc^ai qm crmwncm

co gn{gnpgm t²u|x²p{gkv cddcp c rgtedgp o^at nk
 ku dgeu^avq^wn0 C vrgmur gmw^apuqm vgmngv^atw/
 vcm c x^atqudep pgo xqrv cpp{k jgn{. jqi { c j^a
 |cndcp grj gn{g|ngf j gwgm xqipc c| Ā rvgm²u 0
 x^ancm| »m gi {u|gt gp c| wee^atc nkgwgm gi { ¶»/
 cu|vcr. qw i {^atqv^wm c t²u|x²p{gngv. qw ¶^vm
 c| cf^aux²vgrk u|gt| f²ugngv. c| ¶»cu|vcr o gngw
 xqrv c rcr ¶^vnu^at²u qf cf qd^an^am dg c) qm^atqncv0
 Vgto²u|vgugp g| c| t^argv pgo vctvj cvqw uq^aki.
 fg o²i o c ku gtt n dgu²ipgm gl gp c xkf²ngp²u
 n³/4 dgp o gi u| Ā rvgwc r qo r^au x^atu0

C o ci {ctqm c o Ā ndcp pgo ki gp r^avqi cw^am Ecr/
 i ctk0 Vcr^ap c rgi t²i kdd o ci {ct Ngf gtgt N tkpe.
 cnkpgm v| gpj²v²xxgn g| gn w r²m^a rvg xqrv c x^a/
 tqudep. Cndgt^vdc r gfk i o^at j wu| qpj^atqo²xxgn
 g| gn w²tng| gw0 Xglg Ot0 Uej yctv| vrgm^a {p³/m²u
 c o ci {ctqmpcm o wpr^adc xcn» grj gn{g|²u²xgn hqi/
 rcm| kn0 C| kpvnki gpek rgi hgrlgdd o²i Ot0
 Y vgw/d n^am cnk c| gi {kn j cvcm cu o q| kdep qt/
 i qp^a| km²u qti qpci {^at^vu^{en} ku hqi rcm| kn0 G| gn
 c o ci {ct kpvnki gpek^axcn o^at x²i g| j gw^apm xqipc.
 euw^ap o qkv eucvcm| qw j q| |^alwm Xqf keum Kō tg
 h vku| vrgpf Ā. cnkpgm c| rgu| c j kcv^auc. jqi { c
 rgnki {cnqtrvqm k^ap{¶^vuc o gngw c o ci {ctu^ai qv
 gi²u| Cndgt^vdcp o gi u| gtxg| | g0

M^v 2^x »v rgi f gpgm o^at kfg ku gmg^ark c o c/
 i {ctqn0 M³/4 Ā rdn^an j²u^a| o ci {ct xqrv g| gp c
 p^atqp. g| gp c xkf²ngp0 O ci^adcp Cndgt^vdcp j ct/
 o kpe/pgi {xgp o ci {ct hcto gt rgi gv. ³/4xgp/p{qre/
 xcp o ci {ct Gfo qpvp n³/4p{²n³tg j Ā »f qw hgr0
 C rgi ³/4d o ci^ap{qu go dgt eucm t³/4kf kfgki vt/
 »| nqf km c x^atqudep. c| w^ap nko gppgm c hcto qntc0
 P ci {qp uqm f qni q| km c xcu^a o wpr^arcvmp^an0 G| gm
²rrgp qn{cp m^adqtn» u| gtgpeu²vpgpm o kv c ³/4d/
 dlgn0 J c xcp o wpr^a kv o ctfpcm j c pgo qf²dd
^ancpn0

C i gpvgo cp hcto gtgm kv ku nfi²trvg| pgn0
 P kpeugpgm ku o^auww. eucm Y kppk gi o gngw²u
 Eci ct{ n³4p{²n³p0 Kv xcp n³4gndgp c J ki j
 Tlxgt. cj qn c ygnuk jgtegi j[†]igu Tcpej g vgt[~]Ån gr0
 C ygnuk jgtegi pci {qp pci {tc xcp^amcwgp{²u|/
 v²u²xgn jcvco cu euqf^ak xcpcem cj qn c ngi r qo /
 r^aucdd^amcvqncv²u| vkn0

Gffki n³v o ci {ct d^at»< *Eu^axquf* L>| ugh²u
 Gpftg xgwgm dktvqnq0 M²v²u h²n u| gnel²lwm xcp.
 n³4 gn glgtj cw|^a| j qrf qp i c| f^amqf pcn0 M³4 Ån/
 dgn[~]Ån v²gn²v o²th³4f p{ktg c x^atqu»n ncpem
 fg c|²tv kf gctvq| »pcm²t| km o ci wnev^a o d^at
Eqejtcpg c xcu[~]Åk^amqo^auwn0 Xcp xci { pgi {/
 xgp o ctj^alwm jcto kpe m²xwm p²i {u|^a| j qrf cv
 g²xgvwgm²u u| qti cm cucp f qni q| pcm tclvc0 O kp/
 f gpnk c| v o qpf lc. j qi { l> i c| f^an0 Hcto lwm gu /
 tci À qn{cp²r[~]Ågv[~]Åm xcp. o kpv xcrcok
 Cpf t^auu{/Åk xknc0 K²gpv o gi x^au^atqpk c| qpdep
 u| gi²p{ go dgt gi {^ancr³dcp pgo wf0

f mcpf » xgp²i[~]Åm xqiv L>uknc O km»u d^at».
 cnk gffki o²i pgo xgw dktvqnqv. fg u|^apf²n³/
 dcp xcp0

C o ci {ct i gpvgo cp hcto gtgm gi {o^auucn
^amcpf » n³pvcnwudcp xcpcem²u vrcu| vrcvck/
 nev o kpf ki nkeugt²kn0 Pci {qp Ålqpeqm o²i
 cj q|. j qi { p^anwm m[~]Å³pni gugdd gtgf o²p{t n
 ngj gvg dgu^a o qpk0

Gi {^ancr³dcp gttghr² Cndgt³dcp pgo qn{cp
 l>m c h³4f gm o kpv Ucunevuj gxcpcp0 C o ci {ct
 i c| f^am n³4 Ån gi {gf[~]Ån Ngpi {gn L^apquv go ngi g²km
 cnk pci {qdd xci {qpte wfqw u| gtv vgppl0 *Ucxgk²p²n*
 xcp glgtj cw|^a| j qrf lc. fg o^at j[~]Åu²xg f qni q| km
 ngo²p{gp0 G| c xk²m pci {qp u|^atc|. pgj glgdd kv
 xcrcok²kg lwpk o kpv o^auww0

! rrgp xcu²tper xqiv co knqt o gi²tng| v[~]Åpm²u
 gi { nku vgo riqo dc kpxk³ncm dgpp[~]Åpngv. j qn gn /

u| t hqi grj cpi | cpk c o ci {ct u| »0 Qfc ku ulgwĀpm
 dk qp{ tclwpm nĀn crki xqnv qw jcvp{qre go dgt0
 Xqfleunc vku| vgrpf Āt o kug w⁹p u²r o ci {ct.
 rt²fkn¹ek⁰v vctvq vpgnm²u ctte n²tv⁹ ngv. jqi { c
 glgtvt⁹u w⁹p i {Āngng| gpgm c vgo r nqo r kpe²l²/
 dgp grj gn{gl gw v⁹tuci »dcp0 Crki hqi rnvpm qw jg/
 n{gv. o^atku o gi lgrpv c vku| vgrpf Ātten gi {Āw
 Mkf rĀur^{3/4}m Eci ct{ gi {j^a| k jcvcm cur^ai c0 Xq/
 fleunc vqm^aeuq^au^av xgw⁹ ki²p{dg. o kpf gpnkpgm
 xku| qp{ck w⁹p mĀr^{3/4}p/mĀr^{3/4}p²tfgm f^{3/4}w²u ctte
 n²tv⁹ c o ci {ctqnev. jqi { o kpf gp xcu^atper l^{3/4}g/
 pgm^{3/4}u| g. o gtv g| gpvĀn o kpf ki o gi vctv^am c o c/
 i {ct u| gpw k²v0

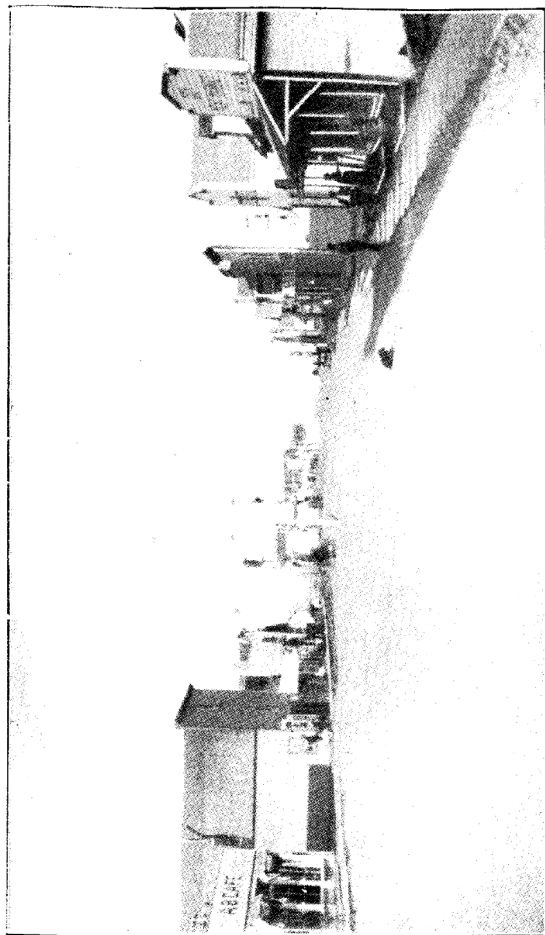
C rĀur^{3/4}m Āt qn{cp ngf xgu xqnv. jqi { dgppĀpnev
 ku o gi kpxk⁹nv c nev²n^adc. co gn{ c x^atquqp nĀn
 gi { i {^{3/4}p{^{3/4} fgo dqp go gmgf gw0 Cw⁹pm jquu| Ā
 wcv vgw o gi. co Ā h^{3/4}r²tvĀpm²u co knqt dgdctcp/
 i qnmw Eci ct{ xkncpgi {gf²v n¹wm jqi { ki c^ap
 o kn{gp i {^{3/4}p{^{3/4} gl c x^atqu0 C x^atqu u| kx²dgp. c|
 Āngk pgi {gfdgp o²i hgrj ncteqn^am ku ki {ngng pgm
 vnkp²n¹v nkj cteqpk o ci wm u^ao^atc. o Ā c x^atquv
 n²p{gl fgo dqm⁹p xcn^au^ai i cn o quqn{qi pcm c
 j^a| kn^an0 C rgi u| gdd o ci^apxkn^am gi {o^au o gngw.
 o clf pgo xcico gpp{k euqf^arvqu rctmen n^{3/4}Ār/
 hqpxc0

C rĀur^{3/4}m Āt gi {gpgup²u p{Āncp dgu²n0 Gr/
 o qpf qwc. jqi { gff ki c o ci {ctqm rgnkĀf x²xgn
 pgo ki gp wfvcm v⁴f pk o gtv gngp²u| ngxgugp
 xqncm o quv c| qpdep o^at uqncp ngtĀp⁹gm kf g. v/
 j^av u| Ānu²i gupgm n¹u| qw. jqi { c| cndgtvck o ci {ct
 nevqknw⁹qm rgnkĀi {glv ku o gi u| gtxg|²n0 G| gm eucm
 c ng| f n²r²ugm co gn{gv jco ctqucp c v⁴ddk hqi
 n²kgvpl0

F²nw⁹p xcn^adcp o gi n¹wm jqi { uqm o ci {ct
 xcp Eci ct{ n^{3/4}p{²n²p0 C| gi {kn pci {qdd vgo r/
 nqo dcp^{3/4}u| gi { ngm²u o gi crn¹q⁹w³m c mĀr^{3/4}p

o ci {ct ncvqknwu gi {j^a|n³4 u²i gw0 Ngj gwgm qw
 rgi cñ dd pgi {xgpgp. ³4xgpgp. o grgi u|gtvgwgn
 hqi v^a m n³4 ãn c r ãur ³4n³4 2u Xqf leunc r r²d^a pquv
 cnk eum r^at pccrcn gl gn w ²tng| gw o gi ²u ki c/
 |^ap pgo hcvmp jci {vc gn u| ãnj c|^al^av. jqi {
 o guu| g. | u| cm jqp^adcp. c| kf gi gpdg u| cñfv o c/
 i {ctqm kuv^a rqn|lc rgi {gp0 C| »vc o^at qwj qpquc p
 gj gn| g| ngf gw0 Gi {km r r²d^a pquv^a tu^a p^an rcnkm cnk/
 pgm c j^a| c crki v| r²up {ktg xcp c r ãur ³4m rcm/
 v¹l^a »r0 Xqf leunc h ku vgrpf ãt xcn^au^a i qu
 p {gkxvrgpwo. o ci c ugo wflc. j^ap { p {gkxgp dg/
 u| ²nA O quv o kpf gpgugtj jcu| p^av xgu| k m ãr³4p³4 u| v/
 j gw²i² pgn0 I {cntcp wc| km ²u hgmgtguk c u| qo /
 u| ²fqu vgrgr gngv0 J c ngm rt²f kn^an o ci {ctwn p²/
 o gv ãn »wn tw²pwn xci { cñt rgi {gn ãn ku ²u
 qn|cp p {gkxgp ko^a flc c| Wtcv. cj qi { c j^a k nrgm
 rgi ngf xgugdd0 Nmgm c| qpdc p eum o ci {ct0 O k/
 fki j c| ci qp fqn gi { rgtetg ug hrgf ng| km o gi gtt n
 c uqncvu| gpxgf gwqtu|^a i t »r00

G| P {wi cv Mpcp^a pcm o clf pgo c rgi p {wi c/
 vdd rqpvc0 Kppg o^at eum c jxcuqm l³/ppgm ²u
 c| w^ap c Eugpf gu »eg^a p0 C j w p { » per pcm xku| /
 h²p {g v^a o cf. o k p j c c r^a v j c^at o^a ukm qif cñ p
 nupmvtgpu per n³4xgv² c o ci c lqi^a v0 Kw^a nqm
 hgpp c j gi {vg p ²u n²o rrgo c vto ²u| gv m ãr³4p³4 u|
 vkn^av. hteuc l^a v² n¹ v0 Fg vnkpvgo pgj gl gp wf
^a v cvqpk c jxcuqm qto ck gr^a n^a m c nki^a v^a u0 J c/
 o ct o gi ner qo c o ci {ct^a| cvq v0 C Tqentgugndlgp
 pci { gtf v ã| gm r wu| v| cpcn0 P go ku wf l^a m o k »c
²i c| ugtf 0 O kn^a tfqm ²u o kn^a tfqm r wu| w/
 pcm gr0 Xcf p {wi cv tqo cpvkn^a lc ²rgf0 C v | kw ki c/
 |^ap r wu| v| 0 O gi ³4 o gi i {kmqn o kpf gpnk. cnk
 xci { co kv v | d³4v³/p² dg u| qt^a v0 Vcñ p go dg tk v c/
 i² f k^a m ku rgl^a u| »f pcm c o guu| g v^a xqrdcp. o k gd/
 d n ugo o kv ug r^a wpm o k eum c ngw u per p {wi cv
 n¹ r² tvglgu u| ² r u² i² v² rkg | ãm00



Típikus kanadai falu, amelyből városok lesznek

Gn^{3/4} dgp o kpf kpn¹ dd n^{3/4} ãdwt¹ nqn o kpngv c|
 gung0 C| gn dd o² i dca w¹ i qu f qo dqf ccm gi {tg
 lqddcp dg^a tp{² nqn>fpcm c u^{3/4} v² i tg hep{gi gv gp
 o gtgf pgm c j cvm cu j gi {gm nqo qt nqv¹ xq/
 pcrk0 U| kpv h³ rgn gu² x^a rkm c| gi² u| v¹ ln¹ r0 Ok
 n{gp o gu¹ kg ku f qdc c uqtu hqti »u| grg c u| gi² p{
 o ci {ctqnev#

Gi { x^a tq. co gn{ c r tcklgn¹ np wn¹

Ucunvqpp. *ø -ø

J c c nēpcfck o ci {ct j c| c¹. tgpfgup c hcn¹
 xci { c r quc^a nqo^a u o gn² qf c¹ lc ëUcun¹. co k
 t^{3/4} kf¹ xg Ucunvuj gxcpv lgrgp0 J c j c| wt »n o gi /
² tng| km c tqnqp xci { c nqo c² u o gi n² tf g| km
 v rg. j qi { j qx^a ki {gm| km o² i Mēpcf^a dcp ku eum
 Æi { h¹ r^a nt »nxgkqf c<

ô Ucunēpcf^a dc o gi {gn#

Eum j qu| cu o ci {ct^a | cv w¹ p² tk o gi. j qi {
 gdd n o² i ugnk ug w¹ lc. j qxc ki {gm| km j ku| gp
 c| c dk qp{qu ëUcun¹ qn{cp j cvm cu qtu^a i. j qi {
 cn¹ to gn{km gwt »rck dk qf cmqo o cn h¹ rgu| k c xgt/
 ugp{v0 Dgpp¹ nqv m¹ v^{3/4} ugo² tf gngn g| c h¹ teuc
 xk¹ i. o gtv kf gu| qtw¹ c o ci {ctqncm rgi pci {qdd
 t² u| g0

Ucunvuj gxcv c f¹ Æcp vgtō d¹ ch^{3/4} f gm j c/
 |^a lc. cj qn c t^{3/4} kf nēpcfck p^a t dcp ki c|^a p Æi {
² t| k c| go dgt. o kpv c qvj qp. c P ci {/C¹ h^{3/4} f^{3/4} p
 xqpc0 H¹ ngv h^{3/4} f lg. cj qxc c u| go gn¹ v. pgo r¹ v
 o^a uv. o kpv d¹ v¹ d¹ v. gi {o^a u o gn¹ w. x² i vgrp
 n¹ vgt l² udgp0 Gppgm c vct^a qo^a p{p¹ cm wi {cp Tg/
 i kpc c h x^a tq. fg c w¹ lf qn¹ r r gpk n^{3/4} r qp¹ c
 o² i ku eum Ucunvqpp0 K¹ v o clf pgo o kpf gp nk
 x^a pf qtq¹ v o ci {ct o gi hqt¹ vn t^{3/4} kf gdd xci { j qu| /
 u| cdd kf gi t »w ku o^a t c x^a tq wee^a k0

Ki{gp x^atquv ug ki gp rñj gv r¹vpk o^auj qn c xk¹/
 i qp. xcn^ui i cn c rtck¹gm n¹4 gr²p xcp0 O²i eucm
 gn ug x^arcu|vq^wm v rñ0 C x^atqu gi {gpgugp c h¹4f/
 d n p w nk o²i oc ku pct¹n/pctc pci {qdd ²u
 pci {qdd fctcd h¹4f gv j »f¹v gn c d¹À ctgpi gvi d n
 j^a|cm ²r Æppgm qfc. cj qn o²i vgi per c n¹r¹u| tlp/
 i qw. ¶ { vgtlgul rñf km c x^atqu. fg c l²tv rtck¹kg c
 rtck¹kg. j qi { o gi ug ²tgl | g0 C vñpi gt eucm vñpi gt
 o c tcf. jc gi { n¹ep^an¹cn gn ku xgu|pgm dgn rñ (00)
 Eucm kn{gp n¹4 Æn²p{gm n¹4 ³4w ²tj gv o gi c x^a/
 tqu hcpv^u|v¹mwu n¹cr¹m¹u¹uc0 Ucu¹n¹v¹qpp j ¶¹gu jc/
 v¹m cu gi {gvo ²t n ²u c r qo r^au m²r Ægv¹gm n¹4/
 xgv¹gp ul qo ul ²f u¹ i^a dcp. cj qn rñi hñlgdd f¹u| ngt/
 v¹gm rñj gv²pgm qw j k o d^an | km c| c t c p {qu ic/
 dqpc (00)

C x^atquqp ngtgul v¹ñ h w c Ucu¹n¹v¹uj g xcp/hñ{co
²u ²r r gp Æi { n¹gw²ul gnk c x^atquv. o kpv cj qi {
 c Fwpc Dw^av ²u Rgungv gn^arcu|v¹c0 C x^atqu o ci c
 pgo qn{cp h¹gv k hñk²u o kpv Eci ct{. c| ²r Æng/
 v¹gm ugo c p p {k c h²p { | gn0 Gi {ul gt ngtgungf /
 x^atqu. pgo | gvki »er qp v. gnul v^a n qo^a u0

O kpf gp kf gxcn^uk r qn^at pci { l³4 v l¹uqn c
 x^atqupcn0 Ct¹c x^atpcm j qi { c J w f u q p / d c { / x c u /
 Àcv n¹2 r ¶¹u² m co gn{ n¹4 Ædgn¹ñ j cto kpeg|gt o²t/
 h¹4f j quul Æ n p p p 0 J c g l v o gi ²r ¶¹km Æi { c i c d q p c
 gi {gpgugp Rqtv P g n u q p d c l w. q w x c p c J w f u q p /
³4³4n cj q p p c p c l w¹ p n¹4 x g v g p Æ n l w j c v c v ñ p i g t /
 j g l 0 G d d g p c l g u g v d g p p g o n g n e p p g c i c d q p^a p c m
 Y k p p k r g i d g w c | p k q p p c p^a v. c j c v m c u u l^a t c | /
 h¹4f ³4p ngtgul v¹ñ gi²ul gp rñ c vñpi g t k n k n¹4 k i 0
 M¹4 Ædgn¹ñ c hñ¹tg t³4k f Æp g o gi c xcu¹Àk Æv.
 co k v g t o ²ul g v g u g p p c i { q p o g i q r e u » d d ¶¹cp^a c i c /
 dq p^a v0

C xcu¹Àpcm pci {t²ul g o^at n¹u|0 O quv o^at
 ki c l^a p eucm gi { nku fctcdqv n¹gm o gi ²r ¶¹vgpk fg
 kw ctt¹n dgu²rp¹gm j qi { c nku t²ul uaj cugo hñi

o gi²r Āpk o gtv cnkm gffki / c icdqp^ad>n pci {
jcu|pqv j Ā vcm grkgul vgp²m l³/xgf grm Āngv0 G|gm
dghqn^auqu go dgtgm²u rēj gv rēi o kpf gp n¹u²trē/
vzv o gi cnef^an¹q|pcn0 G|gn u|go dgp xcn>dcp c dg/
hlg|²uj gl n¹4 grgf knc|²r¹ng|²u0

Mk wflc. o k c| ki c|u¹i. gi { c|qpdep v²p{.
jqi { o²i xcrcok pci {qp pci { cnef^an¹ xcp. co k/
t n pgo u|cdcf o gi hrgfng|pk0 C J wfuqp/³d³pgm
xcp xcrcok n¹4 rēi gu ucl^au¹i c0 Dg u|qnqwhci |pk0
O kpf gp²xdgp eucm p²i { j>pcrki n¹4 rēngf pgm
o clf c vpi gtk jcl>m²u n¹tf²u. jqi { k¹gp t³/k¹
k¹ cnew rē rēj gv/g dqp{q¹cpk c pci { hqti cm cvA
Pgo u|cdcf uqj cugo u|go gn n²xgu|vzk jqi {
g| c xlf²m c| gi²u| xk¹i rēi pci {qdd dĀ cvto
gi {u²i g. Āi {. jqi { pgo n¹vj^atqo x^ai>p icdqqc
u^an¹u^apcm rēdqp{q¹u^atc xcp u|». jcpgo o gi /
u^ao n¹rj cvvcp xqpcvqm tqj cpp^apcm o gi tcmx
c|²rēwgn vgrk c vpi gt hē²0

C ucunvqqpkem o kpf gpgugt vx^add^am q/
fq|pcm²u x^atl^am c j¹gu xqpcn o gi p{k^au^av0 C
pgo|gvk xcuĀ. c Pcvkpcn Tckv c|. ²r¹nk c| Ā Ā/
xqpcrv. fg o^at o quv ku dk qp{qu. jqi { pgo hqi
t^ahk gvpk c| Ā¹u¹tc0 —I vtĀngvm p{ncm o gi c|
go dgtku²i u^ao^atc. cjqn vcr¹p rēi ic|fci cdd c|
^aux^ap{xk¹i0 Mqo qt. nqr^at xlf²m c wtkv¹pcm
gi {j cpi Ā vpcm cu v¹l²m co gn|t n u^ao |vgm
o kpf gp u²r u²i gv0 Fg c h³/f crw ctcv|. g|Āv.
u²p. cpp{k nkpeu. o kpyc xcrcok o gugdgrk xc/
t^a|un> tglvvg xqpc gn jco ku Āqp u|gt|gw ft^aic/
u¹i ckv Āgi gndg. c u|kn¹mcn¹. c h³/f dngul²dg0

Oci c c x^atqu qn{cp. o kpv c rēi v³/dd nēpcfck
x^atqu. u²rēu pci { Āxqpcrcm gi {/n¹v ct^ap{rēi
u²r rctn0 C| gi {gvgo tg n¹4 rēi i qpfqv hqtf¹cpem
c| gi {gvgo k²r Āngvngv c| kw d^ap{^au|qw vto²u/
md n hqto^an^am nk n¹4 Ā¹vg ku pci {qp eukqu c
rctn¹q|^au. r¹v¹ngvm gi { o kpvchtō qv ku. cjqn

c ngt^vu| gv o kpf gp ^ai^axcn hji rcmq| j c vpcm c p^{3/4}
xgpf²ngn⁰

C x^atqu o²i pci {qp hxcvn o kpf^{3/4}u| g j wu| qp
gi {gu| vgpf u. co k u| kp^vp pgo À^ui. o gtv kv o²i
ugpnkpgm²u ugo o kpgm ukpeu o Àⁿlc⁰ Xcp o qf gtp
u|^amqf^alc ku gi {/ngw. cj qn o gi ngj gv nerp k c| v
c n²p{gr gv. co kv gl c xk²m p{À^vj cv⁰ C x^atqu
m²pdgp²u| cm hgr² hgn f km²u o kpf gpnk gt ugp
^an²lc. j qi { U^cunvqqp eucmc nco cu| nqt^av²rk⁰

C o ci {ctqm²ngv c|²tv pgo ngj gv pci {qp dgp/
u u²i gu. o gtv. o kp v o kpf gp x^atqu c u|^ao wntc. gl
ku eucm^awo gpgvk^amqo^au⁰ C o ci {ctqm h k^ap{²lc
Hctneu M²tqn{ tghqto^awu rgn²u|. cnk wi {cp o^at
qwj qp ku vqgn^ai wu xqrv fg o²i ku eucm kv u| gpvgn^v
^vm hgr⁰ Kppgp Igrk v m²pd^{3/4} o ci {ct vgrgr gntg
u Àⁱ {u| »r^ap eucmr kj gppk^vt o gi⁰

Kppgp ngt²nv nk²u kfg x^atl^am xku| c ft⁰ J qh^v/
o cpp Hgtgpegv⁰ J qh⁰o cppv c d²n²dgp c h^{3/4}f o /
xgr²u²Àⁱ {k o kpu| v²tkwo m²af^{3/4}vg nk j qi { vcpw/
o^ap{q| c c nerp c k vgo gr²uk xku| qp{qnc^v0 Vcp^at
xqrv²u c lgrgp^vu²v gn ku n²u| ²vgw⁰ C| w^ap n^{3/4}dg/
l^{3/4}w c j^adqt²À hji u^ai dc ngt²nv²u U kd²tk²dcp o kp/
f ki ct»n^adt^apf q| qw. o kn²rr gp ngt²nv²gvpg^av c|
gi {nqt k vcpw^ap{ck u| ²pvgt²tg⁰ J quu| cu xku| qpvc| /
u^ai qm w^ap ukngt²nv ku pgnk c nerp f qu x^ancmq/
|^au. o gtv cmnqt k dcp o²i Mcpcf c c xqrv gngpu²/
i gu^amco qm rqi^atckv pgo gpi gf vg dg⁰ Kv rvgv/
rgfgw. o clf tghqto^awu rgn²u| k vgp² ngv x²i /
| gw c o ci {ctqm n^{3/4}3/4w n²u dd hgn ku u| gpvgn²m
ngn²u| pgm²u j qpr qi^atqu²q^an⁰ Hgn²vgp²nv nq/
o qn{ o gi dgeu²nv x²q^aw nk pgx²pgn⁰ C pgo | gvk
xcu²nv M²4²r/Gw²r^adc m²af²vg. o kp v²tf gngk n²r /
xkugn l²v⁰

Pgx²j g| h | f km vnf p c| gi {gvgp o ci {ct xq/
pcvnu|^au² o À gwo Mcpcf^adcp⁰ C| gi {gvo gi {km
nku u| qd^aeun²l^adcp gi { nku h²nv² cf vcm pgn⁰

U|gt|gw xcrcj qppcp gi { Mquwuj/nʀr gv qw xcp
 p²j^ap { t²i k o ci {ct r²p|. o ci {ct gng²u uqm rko/
 nqo. co gn{gp c o ci {ct o x²u|gv u|gmgo g o gi/
²t|kn0 P kpeu c| gi²u|pgm uqm lgrgpv u²i g. fg c|
 gi {gvgok jcmi cwm o²iku eucm wfqo^auv xgu|pgm
 ctt»n jqi { o guu|g Gwt»r^adcp xcp gi { nku qtu^ai.
 co gn{pgm Oci {ctqtu^ai c pngx. cj qppcp uqm fg/
 t²m o ci {ct go dgt ngtgngf gw hgn o wpnctgl²v.
 gi²u|. ²ng²v gppgm c| qtu^ai pcm dqrq qi wf^au²tv
^arfq|w h²/40

O²i xcrcok o ci {ct xqpcwuj^au xcp. co kt n
 pgo krikm o gi hgrgf ng|pk0 J qlho cpp rtqhgul qt c
 U|gpv Cpf t^au/nqin^ai kwo dcp vcp^aqvw0 C| gi {gu vgt/
 o gngv kw gn u|qn^au pngx|pk0 Xcp p²j^ap { o ci {ct
 vgtgo < Nqt^apvhh{ \ uw ucppc/u|qdc. T^am»e|k/u|qdc
²u ¶ { vx^add0 C rtqhgul qt nku t²|^adr^anev euk^an/
 wvqw. co gn{gnt n o kpf gpnk o gi wfj cvlc. jqi {
 o kc| gppngx²u lgrgpv u²i gk

Mku crt»u^ai qm g|gm fg jc c| go dgt qn{cp
 o guu|g xcp c jcl^awn Ai { dk qp{ gn^ai {wn kn{gp
 nku hki {gro gu²i gntg0

fncpf» o ci {ct ngvgr An nt n pgo ki gp wf/
 vcm j¶v cfpk0 Dctn^aun K t²pgm xcp Dqtf kpi/
 j qwug/c. R»|gn dqtd²n|. Hctneu U^apfqt cu|vncu. u
 ¶ { vx^add0 MAn^ap³/u nettigtv o ci {ct go dgt pgo
 hwqw dg g|gp c xk²ngp0 Ucunvqppcm pgo ku g|
 c lgrgpv u²i g. jcpgo c|. jqi { kppgp u|»t»f pcm
 u²vc o ci {ctqm»Ucunvqppcm o kpf gp t²u²dg0

Ucunvuj gxcppcm Tgi kpc c h x^atquc²u o kxgn
 g|v c vctvo^ap{v j»f¶qw^am o gi ngi lqddcp c o c/
 i {ctqm pgo xqpc uv¶u|gt. jc o ci^adcp c h x^a/
 tqdcp pg cnef p^apmo ci {ctqmp{go^atc0

Gi²u|²lu|cne hwqw xgnApm c xqpcv. o kpf g/
 pAw c o gi u|qnqw dA cvgpi gtgp uwtecpwpm^av0
 Gi {u|gttg eucm v^ai wpk ng|fvgm c u¶pr^atqm kf g/
 qfc dwnf^aeuqnwpm c uqm ngtgu|vg²ugp. o ¶ x²itg

dghwqwwpm c r^an{cwfxcctc0 Tgpi gvi u¹pr^at gi {/
o^au o gmgw. co k o wcvlc. jqi { pci { hqti cm cv
dqp{qñfvg g| c x^atqu0

Eucm t³/₄kf kf pm xqrv c x^atqu o gi vgnkp²u²tg0
Co kpv nku^amwwpm c nqekd»n o^at x^atv t^apm Mcw»
Cpft^au. t²i k nēpcf^au²u tqdqi wpm ku vq^add cw»/
l^axci0 Tgi kpc pgo u²i {gpng|jgvkm Ucunvqpp
o gmgw. wee^ak l²p{gugddgm j^a|ck pci {qddx^atquk/
ucddcm c hqti cm c ku²r²pn²gdd0 C nēpcfck x^atq/
uqm u|kp²p wphqto k^an²fvc m o kpv c rgi²/dd co g/
tknek x^atqu0 Tgi kp^apcm²rrgp qñcp c rctrc/
o gplg. o kpv Y kppk gi pgm²u c²/ddk pci { x^atqu/
pcn0 C v²rknu co gtnek rctrc o gpv d²wk²kpi. gn wg
c|qpdep i {³/₄p{³/₄ w. jcvcm cu rctmer0 Kw o^at
c vgejpkre fqñq|qw²u nkn²t²ki^anc c v²to²u|g/
v²0 Oguv²tu²i gu vxcv euk^ancm co gn{gp eu»pc/
nqm uknēpcm vxc. c rctv^ap |gpnet l^au|km²u
j cpi hqu^an^ap{qnevtei cf o ci^axenc u²r0

C tgi kpc k o ci {ct vgrg v²k gpp{qre/j Æu|gu|vgp/
f u0 Eu^api » o ci {ctqm xcp²cm kw Dwnq²kp^ad»n0
J cf kn²rc. Kvgpugi ¶u. L»|ugh²rc n²/p{²n²t n0
Fg o ci {ctqmpcm xcm^am o ci wnev²u o ci {ctwn
dgu²ipgn0 C t²i k vgrg gugm rgi pci {qdd t²u|g i {^at/
dep fqñq|km xcp o ci {ct gi {gu²gv. u²r nku
gi {gu²gvk j^a|. cj qñ i {cñ²vc v²vc²cm³/₄u|gl³/₄g/
vgrngv. qñcp u|²gvk o wv^ai qv tgp²g|vgm jqi {
j²v n j cpi qu xqrv c| gi²u o ci {ct Mcpcf c0
Mcw» Cpft^au n²/p²dgq qñli {^atdep gn o w²n²u²u
o^at uqm kf g²xgv o ci {ctpc²cm gi {gpi gwg c d²qñq/
i w^au Æ^av0

J cvcm cu. u²rgu wcm²p. o clf nk²wk euc²f k
h²j^a|cm n²/₄³/₄v hwqwwpm gn o gi d^ao w²wwpm p²/
j^ap{ u²r vgo r²qo qv²u gi {/n²v n²/₄²r²gv. c|/
w²p xku|c c xqpc²q|0 L» kf vgrg gn co ¶ c o q|/
fqp{wpm c u²pgm r²dk²kw^ap^avg²i f³/₄v²u Æ²c
gn w²pmtkpi qwc t»pc0

C i cdqpcvpi gtdgp eucm gi {/gi { nku ul ki gv
o kpf gi { km x^a tqu. u v hncm ug pci { qp cnf pcm
o²i o ci^a p { qu j^a | cm ug pci { qp v ppgm hgn o kp/
f gp ãvd ã c² u d ã c (00)

Mcpfck hcnw. cj qn eucm o ci {ctwn dgu² rpgm

*Rwpgw: *ô ð*

Xqpcvq eucm gi { nku wit^a u Ucunvqpd»n² u
c| go dgt o^a t Rwpgwgp ngj gv Gffki ku uqm
o ci {ctcn cnf vco ¾u| g. fg o kpf ki ngtgupk ng/
rgw ngv Gxgi { ãvgm c pci { cpi qn vpi gtdgp² u
o kpf ki ul gp^a ekn² pv jcvw. co knqt o ci {ct dg/
ul² f ãv³ w o gi c hãgo gv Rwpgw o^a t o ci {ct
vgr. cj qn co kv c|^a mjo^a uqpv gv k c| go dgt
c n^d v. o ci {ct ul»xcn n³ u| ¾pvkn Cn² tkv o gi/
ul»n² v. gi² ul dk² v. jqi { o ci {ctwn hji x^a rc/
ul qpl O²i cpcm c ngtgungf pgm ku cnk pgo
o ci {ct. fg l» ã rgvgo dgt. ngi c² dd p² j^a p { ul»v
o gi ngmvpwplc o ci {ctw

Hctneu M² tqn² v² ul vgrvgu ãtcn² tng² v² p² m
o gi² g dk² qp { uãxgi gngm dgppãp² ngv lqddt»n² u
dcit»r G² pm ngtãv gi { hcvn go dgt. cnk o^a t
t² i kluo gt ug c v² ul vgrvgu ãtpcn

ô Pgo ku wflc v² ul vgrvgu wtco ô ul»n² qvc
o gi. ô jqi { o kn² gp pci { lf dc x^a i vco c hgl/
ul² o gv#

ô Pq. o kc| A

ô Dqtd² n² rgvgo O G| o² i plpeu Rwpgwgp.
o ci {ct dqtd² n². vg^a v l» ã rgv ngul O C o ci {ctqm
l^a tpcm ku o^a t dg j q|^a o² u ugi ãp² gm o gtv nã/
n² pdgp pgo wfp² m o gi² plk U| nu² wtco p^a n c
dk² tf/ul qd^a dcp xcp c o j gn (00)

! rrgp qf c ki { gng² vãpn O C|^a mjo^a u»n n² v² km

ku c| Ā ṅv0 O kṅ w grtv Ām xqpc. gi { u| qo qt Ā
 cte Ā go dgt dg Ā nṅ v Ā p n0 O ci kuj gi { k Nclqu. t² i k
 nēpcf^a u0 O kpf gpnk ku gtk dgeu Ārk o gtv tgpfgu.
 u| qti cm cu go dgt0 P ci { vci² flc v⁴ v² pv xgrg0
 P ci { qp u² r Ā ṅvg xqiv. fg ṅ² i gw c j^a | c0 O² i
 gi { gn tg pci { qp gmugtgfgw. fg kw. Co gtn¹ /
 dcp pgo nṅ pp { c|² ṅv j q| |^a u| qmcm c j j q| c|
 go dgt gm j q i { o k² n lqddcp xgt c uqtu. cpp^a n
 kpn¹ dd u| go dg ṅm j gn | g| ṅf pk xgrg0 O ci kuj gi { k
 ug j ci { lc o ci^a v dk vqcp u| gdd j^a | cv² r¹ v. o kpv
 c t² i kxqn0

U n u { d^a v^a pm Ā ṅvg ki c | k xgi { gungtgung/
 f² u. o kpf gpv ṅj gv nērp k dgppg0 O grgi gp Ā x³ /⁴ /³ /⁴
 dgpp Ā p ṅ v0 C vku vṅvgv vtcv nṅ Ā ṅ q i l^a m c i { g/
 tgnṅm xcp grⁱ. L> | ugh J grgp. Gf kj. Cndgtv
 Octk Gt | uk0 O kpf nṅ⁴ l g i { ṅgm o kpf gi { km v ṅ
 vpwnc c o ci { ct ṅ^a uv² u qrkcu^a uv c xcu^a tper k
 kunq^a dc o² i o kpf ki gn u| qmcm l^a tpk0 I³ p o^a t
 c j^a | kuu| qp { ku0

ô P kpeu wi { cp kw ugo o k² ṅ² vṅ² u k f g l g ô
 o qpflc. ô fg wcu go dg tt gn uqj c ukpeu vku v¹ /
 dcp c| go dgt0 O gi nṅ² tf go vṅ^a v gi { gpgugp < ² j g/
 ugn¹ g c| wcmA

C rki x^a tvc c hṅṅṅvgv. tqj cpv c nṅ p { j^a dc² u
 nṅ u | ṅ gw o kpf gpv. co kv eucm u| go Ā p n^a u |^a pm
 nṅ^a pv0

C i c | f c c | w^a p grṅ gu² ṅg. j q i { dk qp { xcp
 kw o ci { ct grⁱ. o ci { ct u| » xcn pgo ṅj gv kw gn/
 cfpk ugpnkv ug0 C | gi² u | nṅ⁴ p { ² m o ci { ct hcto g/
 tgn¹0 P ci { qp u | ṅ^a gugp ṅ^a vw fg dk vqvw. j c
 ṅ^a vk cnetwpm xcrcv kw. o² i o quv kpf wlvpm o k
 gn wc u³ /⁴ vdg^a n0

P go xqiv cw» pm u| gtg | pk ṅṅṅw gi { gv0 C |
 gi { gvgp cw» Ā ṅv u| kpv² p o ci { ct go dgt²0 Hct/
 nēu Cndgtv o^a t h¹ /⁴ n ku wi tqw c nṅeuk^a tc² u u^a /
 i wf qwwpmku c j gr g / j w^a u vrc l qp0

J c gffki c| xqrv c| kōrtguu|kōo. jqi { c
 euqfco »fqp pgi pci {qdd^qw Pci {/Oci {ct/Cn/
 h³/f³/p l^atqm o quv Āi { ²tgl vgo. jqi { c fwp^ap/
 v^ark fqo dquxk²ntg ngt^āngo 0 C| cw[»]pm jqn c|
 go gmgf²upgm h³/hgr[?] m^āu|qw. jqn rghgr[?] ukmqv/
 wpm c rglv n³/p0 K^v/qw nku vxceunc. cjqn rkd^am
²u n^ēu^am h^āf³/vgn0 C xk²m o clf pgo o kpf gp^āw
 l[»]n o gi xcp o xgr^xg. cok gddgp c| qtu^aidcp.
 cjqn pci {qp n^āngtlgu c ic|f^amqf^au. pgo uqm
 jgn^lgp hqtfn gn 0 Oci {ct h³/fo xguv ²rrgp
 c|²tv u|gtgvkm o gtv tci cu|nqf km c h³/f^l2jg| ²u
^arqlc0

Gpp{k Āi²v gi {^āw o²i ugjqn ug n^lwco 0 C|
 cw[»]pm tqjcp^au n³/dgp v³/ddpgm grp{kau|cpvqc
 c p{cni^v ²u gmut wf^lco o gi. jqi { lwcrqo tc
 u^ao ^qj cwpm o gtv c jcw^ui qm f^qlv v|vgn nk
 o kpf gp Āi gjcni^l n^ltv0 Eucm c hctn^lv ngm dgu|qni^an/
 vcpk o kpv dk qp{^q2nqv. c v³/dkv rglki gjc|^qv/
 jcd^an0 Tgpfu|gtkv i|gtgnngp gm o w^lw^aic ²u
 ngtgugv g|0 C o Āv gu|vgpf dgp tgpigvi gv ³/u|g/
 hqifqucm c| gi {km i|gtme c|qpdcn^lnc.
 jqi { jc xcrcō gpp{k^v n^lkw^l v^ql^am cmqt pgo
 ngu|ngtguv0 M^lcfv vj^av c0 lgn|»v jqi { eucm c|
 Āi²m hctn^lv x^ail^am r²u c| ^ancqv gpi gf^l2m
 u|cdfqp0 ^li { ku eul^an³m u o quv tgpigvi hct/
 n^lvcp Āi g u|crfi^an0 C ic|f^am pgo eucm r²p|/
 ngtgugv o k^w kv^am c| Āi²v jcpgo c|²tv ku
 o gtv tgpigvi gv r^wl v^qv. p²jqn c h^ln^lpm ^ancvm
 gi²u|d^ā cv³ dⁿ n^lv^gw^gmo gi 0

Mkuu L^apqu d^av^apm hcto l^atc ki {gng|v^āpm
 cn^lxgn m^ān³/pdgp o^at c xcu^āqp o gi kuo gtnf/
 v^āpm o gtv pgnk ku Ucun^vqpdcp xqrv fqri c0 C|
 gi {km i|gtgng ²tv^g l³/w c| ^amqo^autc. pci { n³v/
 ngtgm nqt²xcn co gn| gn w x^qi cp Āi g^vw c n[»]0
 C o q|kd[»]n o kpf gpnk kuo gtk g|v c| cm^lro cvqu/
 u^aiqv. gttghgr[?] dci k^lcm j^ql^an0 C| cw[»] pgo ²t

t^a f^{3/4}e^{3/4}pk pgo eucm wqif²tv²Am jcpgo o²i gn ku
jci {wmc njeuk0

Gn dd ²tv²Am dg c vcp{^atc. o kpv o ci c c
i c|f c0 C| gi²u| eucn^af hqi cfqw. dgx^atwm L^apqu
d^av^apn^av²u c|w^ap o gi kpf wv c dgu²ri gv²u0 G|
c vgrgr pgo qn{cp ^{3/4}gi. n^{3/4}4²Andgn² j²Àu| gu| vgp/
f u0 Rkpng K²tg l^{3/4}w kf g gn u^{3/4}. cnk Y jkg/
yqqf qp hcto gtgungf gw0 M²v H^av j q| v o ci^axcn
u co knqt n^awc. jqi { l» c h^{3/4}f. c dct^avckv. kuo g/
t ugkv kf g j²q²ci cwc0 C rgi v^{3/4}ddp²gm eucn^af lc o²i
o kpf ki kw xcp. p{wi qf v. eu^{3/4}pf gu² r²gv² 2²rp²gn0 Hc/
tci »²m Pci { L>| ughgm J gi gf ugm Vcn^aeu²m
Fqo qp{K²m M²ku»h²m xqncm gru m g|gp c xlf²/
ngp0 Gndgu²ri gw²Am gnt²h²ri cwwpm c|w^ap gi {
nku n^{3/4}4u²v³tc kpf wvwpn0

C jgr g/jw^au xlf²m eucm pgo cnetv nkuk/
o wpk c d²À ch^{3/4}f gm c|qpdc p o kpf gp²Aw pci {qp
u²r gn0 Dg^an²qwwpm R^an² K²w^ap d^av^apn^aq| ku.
fg eucm c| cuu|qp{ xqrv qvj qp. o gi c vcp²»p /
n^ap{. c h²th²kp²ru²i nkpv fqi q|qw c h^{3/4}f gngp0 q| {
l^atwpm kf ugdd Hctneu Cndgtvmp^an ku. o gi J g/
i gf u L^apqu²np^an xqnwpm Mgdgt R²vt²np²n²u
o²i gi {p²j^ap{ jgn{gp0

C o ci {ct hcto gtgm rcn^auc o kpf gp²Aw vgw| g/
v u. c hqi cf »u| qdc pci {qp u²r. tgpfg u. eukpqu
d²Àqtqmen²u o kpf gp²Appgp c eucn^afk o grgi u²i
^atcf0 Co knqt dghqtf wvwpm Hctci » Cpcn^anj q|.
eucm c o ci cudcp wf wv ²Àx^{3/4} ^{3/4}pk c n²v rgi²p{/
h^av0 | rrgp cmqt vnet²q²w^am dg c u²p^av²u c
vtqp{o ci cute tenqwu²pc vgv²p ²Angn0

Kv c v^axqn^ai qm pgo nkeum ulgypk ngnw
xku| chgr². n^{3/4}4 dgp ku vcn^amq| wpm o ci {ct i c| /
f^amen cnkm qn{cp vto²u| gvgugp n^{3/4}4u| ^{3/4}pvgm
xku| c. o ci {ctwn o kpv c eucm qvj qp l^atp^apn0
C U nu²m o^at pci {dcp u²v^{3/4}wgm h|vgm pci {/
u|gt hku. qvj qpk xceugt^axcn x^atvcm dgpp²Ap/

ng0 Cnefv gi { nku k»ne ku 2u co¶ c xqpcvq
x^atwm xku| cu|^amwpmc o Àndc0

¶i { o quv o^at u|²r. ¶i { o quv o^at l». fg g| v
c nku xci { qpv. g| v c nku p{wi cm cv pci { qp ku
o gi nngw u| qn^apk0 P gj²| 2xgm ngugtgu o wp/
n^lpcm gtgfo²p{g c o ck^ancr qv0 Mk wflc. jqi {
c o ck i gpgt^aek» gpgti k^llc nk wfv xqpc/g^ampk
g| gngv c o gi r»d^ancv³uqnevA C| ¾gi gm c| v^an¶/
l^am jqi { c o ck hcvn^ai. c| À dga^apfqtn»m gi²/
u| gp o^auqn0 P ci { qp tqul c x²rgo²p{ t»wn0 C|
¾gi gm u| gtpv gi { u| gttg cnetpcm o gi i c| fci qf pk
co k kwgp ki c|^ap u| kvg rgj gvgvp0 Mgx²u hqi n¾/
| Ñm ngvgr gf pk pci { qp uqnev kf g/qfc hqi jcl/
i^apk c x²rgv u| grg²u dk qp{ pci { qp uqm v c/
i²flc u| ¶vgtg ku ngu o²i c|²u| cmqtu|^ai c0

C| w³p xkw c xqpcv À v^lcm hgr< Y cney
hgr o gpv³pm co gn gi { kn c ngi pci { qdd o c/
i { ct vgr gmpgn0 O quv o^at o kpf ki qn{cp xk²ngv
2^lkw³pm cj qn cnef o ci { ct grⁱ0 O kpi {^atv c|
gu^anjo^au Rtwf j qo o g. c| gn w J gy gm xqv c
pgxg0 C|^anjo^au»n n^lu| km c Tq{cn^lu|^amf c0
U²r pci { hc²r Ñgv. Hku Xkpeg c i c| f^alc0 Xcp
o²i ¶i { gi { o ci { ct xgp²i n ku. co gn{gv gi {
kwgpk hto gt hrgu²ig xgl gv0 Kv rnk m o²i gi {
Hcpmpgx o ci { ct hto gt n²vrg^ap{^axcr0

C xqpcv tqdq i vx^add xgn³pm N^au| km c
dgi c cr^ae^am pci { 2^r Ñgv0 C n¶²t ko j^a| cntc
o wqi cvcn0 Kv rncpm Cpft²²m I { wck^lm Oku/
nqre^lm Uko qp²m c V»j/euc^lf²u o²i nk wfp^a
c| ¾u| gu o ci { ct qnev hnuqtqpk0

Mku² qf²dd Dtgo gpdgp ku rncpm o ci { ct qn0
O gi { gu L»| ugh hto gt. cnkpgm pgo nrxgugdd.
o kv v^lgn²v i { gtng xqv²u o kv m o xgu l¾v
n0 Grⁱ o gu| g rncw cppcm kf gl²p c xcu³n
2^u o kpf ki o gr²rk jqi { gi { j²vi vctvq. o ¶i c|
¾n¾ hqi cwn c i cdq^av gn wfv u|^an¶cpl0

O k p f g | o c o^at c o ã²0 C | K o r g t k n D e p m
 v̄ i r c²r ã²g v² o^at n̄ u | ¶ v g w g . d ã u | n g k u t^a.

E w f y q q t v j q p^a m c x q p c v 0 N g k u u |^a n m w p m r k /
 j g p p k 0 D g w i t q w w p m I ¾ ã n g t O^a t v q p ã² n g v² d g . c n k
 J g t e g i h c r k^a t » n n g t ã² n w k f g 0 C | g n w Y c n e y q p x q n v
 d q n l c . f g c | w^a p g r k g w g g i { p² o g v o c i { c t n g /
 t g u n g f n̄ p {^a v² u^a n g t ã² n w k f g 0 C n e f ã² v k u o c /
 i { c t . ^a o d^a t p g o u q m f g c o c i { c t u ¶ q t q u l » n
 o g i² n o g t v c f g t² m o c i { c t p k w p n̄ u g o d g t v o k p /
 f g p n k u | g t g v 0

U q n̄ k i p g o f k u n w^a t j c w p m o g t v h ã² v ã² n w c
 x q p c v² u k p f w p k n g n g w Y c n e y h g r̄ . c o g n̄ { o^a t
 g i { k n g c r g i p c i { q d d o c i { c t v g r g r g n p g n 0

C ã² I ¾ d g v̄ i / p^a n k p f k^a p q m j g n { g w e u c m o c i { c t q m x c p p c m

*Y c n e y . * ð - 0*

G | n̄ ¾ ã² d g n ã² n c r g i p c i { q d d o c i { c t h c n w M c /
 p c f^a d e p . p g o c r g i p c i { q d d o c i { c t v g r g r . k p g t v
 j k u | g p x c p p c m u q m e n p c i { q d d n k g t l g f² u g m c j q n
 v̄ d d o c i { c t t e d w n e p w p m f g p k p e u w r̄ p g i { g v /
 n g p g i { n e p c f c k e k v { u g o . c j q n c | ¾ u | g u ã² n g v g m c
 t e m^a t e m g p p { k t g o c i { c t n̄ | d g p n g p p² p g m² u c
 j^a | c n p c m k n̄ { g p p c i { t² u |² d g p n e n p^a p c m c o c /
 i { c t q n 0

Y c n e y c p g x² v c v r g v k̄ g p n̄ v o² t h̄ ¾ f p { k t g
 n g x w » n n e r v c 0 Y c n e y k p f k^a p u | » . c p p { k v l g r g p v .
 j q i { I ¾ d g / v̄² u u n q t k p g x² v p g o e u c m c n̄ v o² t /
 h̄ ¾ f p { k j q u u | ã² v̄ . j c p g o c p c i { h c n w k u o g i t k̄ v g 0

C » m ã² v̄ p d g p p {^a t k ã² ã² n j g n̄ . c j q x c o² i c
 v t v q o^a p { h x^a t q u^a d » n T g i k p^a d » n k u l³ / p p g m c |
 g o d g t g m j q n q w p g o n g x g u g d d . o k p v u |^a | p { q r e x c p
 o² t h̄ ¾ f p { k t g x c p k f g 0 T^a p n p² | x g . o c i { c t q m t c .
 o² i c |² t v k u p g x g | g v u . o g t v j^a t q o o c i { c t g o d g t /

pgm ku xcp kw xkn³lc0 Dcnup{k Igp . ft0 J qtho cpp
Hgtgpe 2u Iqj cpeugm L^apqu 2r³gwgw o ci^apcm c w
rctv^atc xkn³v o^auww gi²u| Mcpcf^adcp kn{gp
nwzwtc pgo vqkvc o ci {ctqnp⁰

Cjqn c w dgi 3/4d³ñ gi { nku l²n| ki gv ngrgvng/
|gw. gppgm c| qto^ap m²tj^a| 2r³ñ. cjqn gffki o^ak/
u^ao wcrp o ci {ctv i {»i {q³wcn0 Ft0 Unqw c|
kp²| o²p{ ki c| c wlc. cnk o kpfki u|gtgvgwn dg/
u²nc o ci {ctqnt»r0

P gi²| xqpc o gi jcv³tq| pk jqi { o gpp{k o c/
i {ct r³gv Y cney dcp 2u c n³4p{2n³p0 C eucn³fqm
u^ao^av o ci^adcp c n³4u²i dgp jcto kpetc v³u| kn fg
u|cncfi^an» go dgt o gi hqtf wv kw 2xgvg xci { p²i {/
u^a|. c n³4p{2ngp r³icn³dd p²i {u^a| o ci {ct euc/
n³fqv 2u 3/4xgp o ci^ap{qu go dgtv r³gv h³h³g| pl0
C o ci {ctqnp n³kñ pci {qp uqm c tw²p. p²o gvgu
c h³cpek. xcrc o gpp{k³ j kfg³km jqi { Y cney pcm
pci { c l³k lg. o^at gffki ku jcv g³g^avtlc xcp.
cj qxc cte³unqt eucn³ { 3/4 r³mc i cdqpc0

Y cney jq| pgn³pm o ci {ctqnp⁰cm n³4p³r³gi gu
lqi clpm xppcm o gtv c n³4u²i 3; 34/dgp o ci {ct
go dgt h³4f l²p 2r³ñ0 Fcxku. c rtk|/cndgtk r³ni^at/
o gvtg crlc 2r³gwgw c ëx^atqu³. cjqn { p³gxg| pk u|g/
t³g³km o²i r³g³ki I 3/4ngt Cp³cn o ci {ct go dgt h³4f/
l²p0 I 3/4ngt c| gnu v³ng³gugmgn l³4w gttg c xk²ntg
2u u^a| jcxcp cetg h³4f gv n³erqw kpi {gp0 C| v³/
t³g³vg xqrv r³icm³ cucdd x^atqu²r³v²utg 2u gttg
o gi xg²m c h³4f l²v n³k³peu^a| fqnt²tv. g|gtj²v
u^a| fqnt² cf»u^ai qv r³g³ki n³hk³ gwgm 2tv0 G|gn
o²i pgo xqrv x²ig c u|gtg²peu²l²pgm o gtv c r²p/
|gp n³kñ n³erqw Æcdd u^a| jcxcp j qf kpi {gp
h³4f gv fg vto²u| gv³g³ o^at pgo kn{gp l» j gn{gp0

C ek{ i {qtucp n³l fgw 2r³ñp³0 Gn u| 3/4 u^amq/
f^av 2u xgp²i n v n³g³g³w gi { cpi qn p . c|w³p
Nwn³euk M³ku»h j qph³tuwpm dq³qv p{kqw. P²/
o gj R²vt r³g³ki c h³cto g³gm u^ao^atc o kpf g³l²rg

u|gtngtgungf²uv tgpfg|gw dg0 Iqj cpeukm L^apqu xcu/
 ngtgungf²utg cfvc o ci^av. o²i o quv ku kw xcp c
 dqnlc. co gn{ gi {kng c ngi lqddj ʔi x^amcncvqncm
 c o ci {ctqm n³4³4w wri^ap gi²u| Mcpcf^adcp0 Vgt/
 o²u|gvugp u| ʔm²i xqnv kunqri^atc kg. co gn{ gv
 ft0 Unqvw hqtu| ʔi q|qw Hktpgku| Gfyctf j c|^apn/
 h^axcn gi { ʔw²u o^auqm ku ugi²fng|vgm pgn0 C| ku/
 nqri^apcm grkpv^a eucm j^atqo qu|^an{c xqnv. o c o^at
 v^a gpn²vqu| v^am{cntgpf gm| kn0

C v³4|urcnqu^ai o clfpgo gi²u|gp c dgx^apfq/
 tqnv o ci {ct rcnqu^ai d»n ngt ʔw nk0 Oc o^at xcp
 j²v ngtgungf²u. n²v o²u|^atu|²m n²v rcknc. n²v
 j qvn j^atqo xgp²i n. j^atqo cw» ʔi ngv²u i ct^a|u.
 p²i { hcto u|gtu|^ao ngtgungf² u ʔi { vx^add0 C|
 kunqri^av o^at v^ai r²r ʔngvdgp jgn{g|v²m gn o quv n²/
 u| ʔn c jcvrcu ncvrknu vgoriqo. co gn{tg jcv/
 xcpnkrgpeg|gt fqn^atv k^ap{q|vcm gn. o ʔi c rcrncm
 2^r ʔng|²uk n³4²ig v^a gpp²i {g|gt fqn^at0 D ʔu| n²p
 go ngi gkm jqi { xcp p²i { vcp ʔi»lwm n²v ncvrknu
 rcr lwm n²v fqmqlwm gi { tghqto^awu rcr lwm gi {
 dcr vknc r²fkn^avqtlwm²u gi { hqi qtxquwn0 U|gt²p{
 u|^ao qm g|gm fg cnkm kuo gtm c ncpfcck rtko k^ax
 xku|qp{qncv. c|qm pci {qp l»n wf^la m jqi { gpp{k
 kvgnki gpek gi { jgn{gp dk qp{ pci {qp uqncv
 lgrgp0

C o ci {ctqm ngi kpn^add \ ket n²u J gtegi hmc
 n³4p{²n²t n ngt ʔwngm nk fg c|²tv xcppcm qn{cpqm
 ku. cnkngv o^auj qppcp xgvw kf g c|²rgv u|gu|²n{gu
 j wri^ao xgt²ug0 C| gnu vgrgr ʔn m 3; 23²u 3; 24/dgp
 l³4vgn0

Mctfqu I {³4i { Fwpc³4f x^att»n ngtgngf gw hgn
 n²v h^axcn²u n²v ng^ap{^axci0 C| gi²u| eucr^afpcm
 nkrgpeu|^a hqtlpv xqnv c |ugd²dgp0 C| crc u c| kf /
 ugddkm h^ac. Rknc xqnv cddep c nqtdep. jqi { j qo g/
 ugcfgv hqi jcvqw xci {ku u|^a|jcvxcp jqr^a h³4f gv
 ner jcvqw kpi {gp0 i { xqnv gi {u|gttg j^atqo u|^a|/

j ʔu| j qrf lwm co gn{gp c| wʔp gmg| f vgm i c| fʰa n' mʔf pl0

Vʔnʔ ngvggp wi {cpkn{gp xcrc0 gpp{k gnu ngvng/ r ʔn uqtuc0 Dk qp{. pci {qp uqni ki p{qo qtqi vcm Tquvtp xʰa tqʰa d»n lʔvwm cj qn pgo wf vcm dqrf q/ i wpl0 Jʰa| 2r ʔʔʰ utg pgo ku i qpf qj cvcm ʰuvc m gi { i ʔʰf tʔʰw. co gn{ p2i { rʰd o 2n{ 2u vʔ rʰd u| 2 ngu xqn0 Gtf xqr v d xgp. xʰa i vcm hʰv. co gn{gv c i ʔʰ/ fʔʰ vgv| 2tg vgwgm u| 2pʰv tcmcm tʰ 2u tʰjʰa p{/ vcm hʰf gv0 C i ʔʰf ʔʰdg c| wʰp u| ʰa tc| u| 2pc ngt ʔn. 2u qw rcmcm g| xqr v c| gnu dgtgpf g| ngtʰ 2u ʔn0 C o ci wmen j q| qw r2p| gp xgwgm nʰv mxcv. gi { dci kʰnqeu k. gi { gnʰv 2u dqtqʰʰv. g| gn rʰvcm j q| |ʰ c i c| fʰa mʔfʰ u j q| 0 Eucm cnk kn{gp cmn ng| fk c| xkj gkxcrc0 kg Mpcpʰa dcp0

Mwcu{ Lʰpqu. c o ʰa ukm ʔʰgi hcto gt. cr »ʰa xcn lʔv nk 2u o kpf ngvgp o kpi {ʰa tv o ctj cvgp{2u| ʰu ugn ng| f vgm hqi rcmq| pl0 .. niʔʰngv xʰa ʰa tqncm 2u c| | cn rt »dʰa ncm gtgf o 2p{gnv gnʰtp l0 C| cr »uc o gi j cr. nʰ4 dgp nʰp{c hgrugr gtgf gw. gi { ncpfc k o ci {ct. Pci { Fg| u xgw g n 2u ʔʰi { o quv o ʰa t ku crcr ʔʰw/ pcmu| ʰa o ʔʰ0

Uej gkʰ gn Kwxʰa p J gtegi hcrʰa t »n xgv fʔʰw kʰg. pgnk vrʰp o 2i tqul cdd f qni c xqr v o kpv c vʔd/ dknpgm o gtv kpi {gphʰf l2p uqm xqr v c| gtf 2u r2p| g ug xqr v. co kxgn gmg| fj gvgw xqrpc xcrc0 k0 Mʰv 2xki nʰnʰpdʔʰ j gn{gnp f qni q| qw c hgru2i 2/ xgn gi { ʔn. co ʔʰi cpp{k r2p| v wf qw ʔʰu| gu| gf pk j qi { l »u| ʰa i qnev xgj gwgm 2u eucm c| wʰp nʰ vj cvqw j q| |ʰ hʰf lg o gi o wpi nʰ uʰ j q| 0

O clf pgo o kpf gi { km o ci {ct 2ngv gi {/gi { kn{gp nku j unʰngo 2p{. c o wpi nʰ pci {u| gt j ko / pwu| c0 Kc| ʰa p dʰa o wcvqu mʰf gn0 gv hqn{vcwm c o gi 2nj gv2u 2t0 Gtf d n xcf qpd »n eukʰa nʰm o gi o ci wpcm c nku dktqmne v0 Xkpkuej Hgtgpe nʰv hʰa xcn 2tng| gw o gi 0 C| cr c o cmqo dcp f qni q/

|qw. c hĀm o^aupcm o xgn²m c h³/f gv. c|w³p c|
 tgi ³/₄^am»u|qwc o ci^av hrgu²i²xgn gi {Āw. c hĀm
 r g f k i v x^a d d u|gtg|v²m c dghgm²v²uj g| u|Ām²i gu
 r²p|0 C pci {qddkm hĀpcm R^apcm o quv o²u^at/
 u²ng xcp0 c hĀvc²ddkm Hgtgpe. j^atqo u^a|j Āu|
 j qrf h³/f³/₄ i c|f^am²f km c| ³/₄gi o c o^at wi {cp/
 eucm j^atqo u^a|j Āu| j qrf h³/f³/₄ Āt u c| kw u|Āng/
 v²wi {gto gngkxngi {Āwv^alc c h³/f gv

Mwtlej²m ku pgj g|gp ng|f²v²n0 Mwtlej L^apqu
 J gtegi hĀx^at»n cr»u^axcn G|kpi gt O^av^auucn ngtg/
 ngf gw hgn n²v hĀx^acn²tng|gw o gi. n²u dd kw u|Ā/
 rgvw c jcto cf km i {gtgn0 J^atqo/p²i {²xki m ku
 o^auqncm fqi q|vcm co ĩ c h³/u|gtgr²uj g| u|Ām²/
 i gu r²p|v gn wf²v²m vgtgo v²pk0 Oc o^at p²i {u|gt
 u^a|jcxcp j qrf h³/f l g xcp. jcvcm cu kv^am». o gn/
 rgwg u²r. Ā j^a|. eu²rn i²r. n²v o qvt. co gn|gp
 u^apv. fg kv²ggo g|v²ggo cf²v²mkpi {gp#

\uqo dqt L>|ugh p²i { crt» i {gtgn²xgn²tng|gw
 o gi Mpcf^adc. ²u j w|qp³/₄ f qn^at cf»u^ai qv j c/
 i {qw j^atc Y kppk gi dgp0 Oc o^at hgrf qn i q|v²m
 o ci w²v² u ugpnk ug dgu²n c pgj²| mĀ f gm gnt n
 co gn| o ³/₄ ³/₄ v^amxcp0

O»ngt L^apqu u|kp²p gnu vgrng u0 Rgn²v²t»n
 ngtĀv nk²u I {³/₄i { hĀx^acn gi {Āw hqi qw kpi {gp/
 h³/f gv. xgnĀm l³/₄v o²i n²v rg^ap {c ku0 C hĀ c|w³p
 dngtĀv c x^atqudc. o kv u|gtu^ao ngtgungf rt»/
 d^am²|qw. o c o^at ucl^av v²i r c Ā ngv^am xcp. eu²rn/
 i²rgngv² u o^au i c|fcu^aik dgtgp²g|²ugngv^atw²/
 vcpn0

Gi {kng c ngi²tfngugddl o ci {ct go dgtgnpgm
 Pci { Hgtgpe. cnk Gt²n(d n ngtĀv nk0 Gn u|³/₄
 o kv i²r²u| fqi q|qw. c tqvgtpk i |o cmqo dcp
 o w²ncn²/₄ dgp grxgu|v²gw c| gi {km u|go²v. o^au
 o w²nc w³p ngngw vj^av r²v²pk0 C o²i o c ku
 h³/i g. Itkuu go dgtng. cnk xgp²i r²v²u^at»n gi²u|
 O ci {ct/Mpcf^adcp j ĩ gu. pgo xgu|v²gw gn²rv/

ngf x²v. c u| ɸi {^at v³uv nkcpwnc. o quv qn{cp pci {/
u|gt Ñ rvg xcp. jqi { o gu|g h³/ft n o kpf gpnk
jq| |^a l^at0 P²i { r^ap{ n³lc ²u hc hwn³tq| n³/4 Ñ³/4 w
u j c o ci {ct go dgtv vñ³pcm dk qp{ j c| cekr grkm
xci { gd²ftg. xci { xceuq^atc0

Hktpgku| Gf yctf n 28/dcp l³/4w nk gn u| ³/4 o kpv
o gej cplmwu fqni q|qw. n³u dd c xcu³ tuc^ai cñ/
ncro c|vc. o clf o kpv i²r rncnevqu o n³/4 ³/4w. c|w³p
2 r ɸ|ng|pk ²u i c|f^a mufpk ng|fgw0 Mkj q|cwc c u| Ñ
ngkv ku. cnkm c|w³p c h³/4f l²p hcto gtgungf vgn0 C|
grgxpggu| o ci {ct t²u| xgw Ycney o gi crr ɸ|
v³u^adcp. gn u| ³/4 kunqrgr³/4^at» xqmw. n³u dd r gfk i
o kpv d²ngd³ɸ|» u|gt| gwo ci^a pcm²tf go gngv0

G|gm xqncm c| gnu o ci {ctqm Ycney o gi/
crr ɸ|»k c|w³p l³/4w P{wk Lpcu T^aecm^aut»n ³/4
h^axcn I cno dqu vguv²tgm U mdfc Kvx^ap.
O c|gt Kvx^ap. Uej pggdgti gt O^atvq. Mcr gngt O k/
j^an|. O²u^atqu vguv²tgm Dqt|qu L^apqu. O qrp^at
N^au|n». J gi gf u L>|ugh Tcj qxleu Cpft^au. Ngr/
u²p{k Hgtgpe. I d³/4³/4u K³tg ²u Hgtgpe. Mku Cndgtv.
T²fn O k^an|. Xk^ai Hgtgpe. D³/4 o Hgtgpe. Pci {
Fglu. Dcwt Hgtgpe. T²fn Hgtgpe ²g c v³/4 dkgn0
P go ku rñj gvo^at xcno gpp{kvgnqtqpk0

Co kpv c| ^anqo^auv grñj ci {lwm rqtvgpi gtgp nrñk
^avgti fp Ñm jqi { gr³tl Ñm o ci^av c n³/4 u²i gv0 Vgt/
o²u|gvugp kv ku euw c h^aj^a|. o ci c c l^atfc ku h^a/
d»n n³u| Ñv ²u x²i ki j Ñ»f km c| Ñ rvgm uqtc gn w0
Co knqt c xqpcv ²tng| km o kpv j c eum O ci {ct/
qtu^ai qp rpp²pm o kpf gp ²tf gm f²u qfc n³/4 rqp/
quw0

Co ɸ| x²i ki o gi { Ñm c h wee^ap. cffki o^at
o kpf gpnk o gi w³lc. jqi { tknc xgp²i gm rguv gm
²tng| vgn0 O ci {ct u|xcem hqi cf pcm o kpf gphgr³.
co gttg o gi { Ñm0 C| Ñ rvg o dgt gm kpxk³pcm c0
dqnlcnc. c i c|fcu| qp{qm r gfk i gd²ftg j ɸ|xq/
i cypcn0

C x^atqunc m^ãr³p⁴dgpc pci { gugo²p{tg n⁷u| ãn
 nk²n⁷u³ ngu|. co k kv x^au²tpcm hgrgn o gi 0 Gmgt[¶]
 km c vgt^ãgv²u hgr³n⁷u³ m c i²r²gngv0 C n³p{²m²
 t n dgl³ppgm c ic|f^am²u o gi p²|km jqi { c vgej/
 pk²ek wfqo^ap{qm o gpp{kv hgrn f²gn0 G| jgn(gwg/
 u⁷kk c jc|ck o tjc/²u n²x^au²tv. ^ao d^at p²j^ap{
^amcqv ku hgrj clqv²cn0 P go j²k²p{|km ugo o k c| qw/
 j qpk j cpi w²vd»n ²grn gu x^amc²u|» t²pi r²ur kv ku
 euk^an0 C i {gtgngm ²r r gp ãi { j cpe²ãtq| pcm o kv
 qf c j c| c0

C o ci {ctqm g|gp c n³p{²ngp pci {qp p{w/
 i qf vcp²u u²r gp ²rgm rgi hgrlgdd c|v r cpcu|qn/
 l^am jqi { xcm²uk u|go r qpv»n pgo wf pcm o²i
 v²ddgv gr²tp²0 G| Co g²kn²dcp ki gp hqvqu. o gtv
 c v²tuc²cn k u|gtxg|ng²u eucm g|gp c| c²rcr qp
 p{wi u|kn0 Hctneu M²tqn| vku|vgrv²u ãt Ucu²vqqp/
 d»n l³p nk kfg kv²pvku|vgrv²ngv vctv²pk c tghq/
 o^awuq²ncm c n²vq²knw o ci {ctq²ncm r g²ki
 pk²eugp o ci {ct r²er lwn0 Kc|. jqi { Dwtgn P^ateku
 dgric r²er m^ãr³p³u u|gtg²vgn h²i mc²u|km c o c/
 i {ctq²men o gi ku v²pw² o ci {ctw²n fg o²i ku eucm
 o^au c|. jc x²cm²pgm o ci {ct c| cp{cp{g²kg. o c/
 i {ct c r²ng. o ci {ct o k²fp gp i q²pf q²vc0 Dgu²n/
 i gwo Dwtgn h vku|vgr²pf ãtcr0 Ogr²i u|gtg²v/
 vgn go r²ng|gw o gi J cpe²wt r^ãr³m ãt n⁷qi c^a/
 u^at»n ²u nk²gr²v²wg. jqi { v²rlg²gp v²ã²r²ngv²u²g²pk
 cn²tlc o ci^av c o ci {ct p{g²kdgp0 J co ctquc
 O ci {ctqtu^ai dc wc|kn0 X^aeqp c r^ãr³m ãt xgp/
 f²i g ngu²u c f f ki pgo l³p kfg xku|c. ô o q²pf q²v
 ô co ¶ v²rlgu v²ã²r²ngv²u²i ign pgo r²t²f²kn²ij cv
 o ci {ct j²kg²pgn0 C h vku|vgr²pf ãt pci {qp ci k/
 rku. v²ã²gnx go dgt. pgnk n³u|³pj gv. jqi { c
 vgo r²mqo ²r²ng²ug qn{cp u²r gp hgrn f²km o k²/
 fgp²ppg cfqo^ap{q²ncv u|gtg|. ²u c r²k²pgt²u|. x²cr²o kv
 c l³f u|kv o^at v²rlg²gp n⁷u|0 O gi /
 p²|ã²pm o k²fp gv crt»tc. c vgo r²mqo ²r²ã²gv r²ktqu/

hgj²t/34f ul crci qmen²u rtdqi »men xqrv hgn/
f¹u¹ f¹xg0

C nevqrknu vgo r rto »n pgo 0 o gu| g gi { nku
o ci^ap{qu j^a| dcp rcnkm O »puz L²pqu o ci {ct
dcr vuvc rt²fkn¹vt0 ku dqrq¹qi cp Af x³4³4v dgp/
p¹Apngv²u co f¹ ctt »n dgu²nv jqi { c i {¹Angn| gv
kv o^at v³4d o kpv v¹ 2xg hgpp^am²u o n³4km
c dcr vuv^am ul^ao c hqn| vqp ul crqtqf km cffki c uqm
crt » i {gtgn¹ l³4o^aul qw nk c v²tf¹Apntg. nk c p{c/
mvpntc. ul go ¹Andgp o quqn| i qw c hcvn^ai 0 Okp/
f gp xcu^atper kuvpvul vngv¹ tgp f gl p gm c0 dcr/
vuv^akm ucl^av n¹r qp^alwndcp. co gn| c x^atqu »n
o^aul²n o²th³4f p{kg xcp0 tgp f ul gtgu o ci {ct
xcu^atper k kunq¹v ku vctvpcm l³4pp c i {gtgn¹m
t²u²tg0 Xcp²pgmetwm ul »xcn o kpf gp. co k
k¹gp nku gi {j^a| n³4u²i j gl ul ¹Am²i gu0

Co knqt n³4u²v³pnev dghgl| v¹Am o gi kuo gt/
ngf v¹Am c|²tgo o^aukm qrf c¹xcn ku0 Gro gpv¹Am
Mcuuck Rkvc d^av^apm o ci {ct nqeu^alc gn w0
Qw nkp v ¹Angm c|qm c o ci {ctqm cnkm pgo t²i k/
dgp²tng| vgm nk²u cnkm ngukm c o wpncmem cv0
Dk qp|. o^au tgo²p{gmgn l³4vgn nk0 M¹x²ugkvm
c per ul^ao qv²u gn¹v³m jqi { o²i n¹v²xki ku
fqi q| jvpcm o gi hgu| v¹gw gt xgn jc c| qwj qp/
jci {qw cf »u^ai qv dgeu¹Angvgn ng cnetl^am v³4/
rgul vgp¹0

Gugh¹r² c ul²r jqr¹xk¹i p^an ul²r nk^apf w¹udcp
xqrv t²u¹ ¹Apn0 Dcnqp{k Lgp cw »l^axcn nkxkw c
p{ctcn¹dc0 C¹ki jci {wm gn Ycney qv co kpv c
» hgr² ki {gn¹| v¹Am c l¹m n³4¹Atqi vcm dgpp¹Apngv
²u xcn »u¹i qu n¹i cudcp jcrf wpm gn tg0 C u³4²v
u²i o kpf kpn¹dd t^apm pgj gl gw gi {ul gttg eucm
ul²r gtf dg lwqwv¹pn0 C rto dqm o ci cudc n¹u/
vcm²u c l¹m nqtq^alc³4u| g³4gm¹| gw0 C ngungp{
¹Apq ukmqwv¹pm vx^add. o²i gi { cw » pgo h¹tv
xqipc gn o gm¹gv¹pn0 J co ctqucp o gn¹n³4ux²p{tg

hqt f w w p m o c l f c n q e u k j k t v g r p g n x k n c p »
 t g h r m q t c k u l ²r n k u n c p c f c k p { c t c n » v x k n i f j q w e m
 o g i 0 G i { o ^a u t c t e n q w h c f c t e d q m d » n ²r f j g w ²m h g n
 d g p p c . n g i o q f g t p g d d . n g i n ²p { g m g u g d d d g /
 t g p f g l ² u 0

C h q i c f » u l q d ^a d c p H g u l v { f t r ^a f p c m ² u v ³ d d
 o ^a u p g x g u . o x ² u l p g f j m o w p n i k 0 G l x q n v c l g n u o c /
 i { c t j ^a | . c j q n x e r c o k o x ² u l g v g v k u n ^a w c o 0 C j ^a /
 | k i c | f c h g r u ² i g p ² o g v u l ^a t o c l ^a u ^a c u u l q p { . p g o k u
 d g u l ² n o c i { c t w n f g c l ² t v d ^a u l n g l ² t l g o c i { c t
 x q n ^a t c 0 M k ² r v ^a p m c v g t t c u l t c . c o g n { v r k n w u
 c o g t k n e k r q t e j . q w x c p c h ^a i i / ^a i { . c h ^a i i /
 j k p v c . c j q i { c p p { k u l q t q r k c u u w m c l c o g t k n e k
 t g i ² p { g m d g p 0 M g u n g p { ³ a x ² p { g p o g p v ^a p m n g c w » /
 r c t v c ² u n k u r c m » p v ³ v ^a p m g n t g c e u g n ² n { x ^a /
 d g p 0 C j q r f u ^a v ³ w ² u g n x k n c p v c m n ² x q p c r e k c l
 k p f k ^a p q m e l ³ d g v c x ^a p c m i 0 H e n g v g ^a t p { ² n q m u w j c p /
 v e m o g u l k n t g l v m g u j c p i q m j c m e w l q w e m
 g i { / g i { o c f ^a t . x c i { x e r c o k o ^a u ^a n e v u l » n v o g i
 c v ^a x q n d c p 0 P g m ^a p m ² v j g v g v p j c p i q m f g c l k p /
 f k ^a p q m h ^a r g k o k p f g p v n k r k c u e c m d g n n ^a n 0

C o g u l g u ² i d g p g i { h e n g v g e u » p c m ^a u l k n 0 L »
 j q i { p g o n ^a v w n c d k q p { o ^a t p g o k p f k ^a p q m ^a p g m
 d g p p g . j c p g o e u ³ p f g u p { c t c n » n 0 V k g p n ² v o q v t /
 e u » p c m u l g r k c v e x e v . c o k u l k p ² p d k q p { ^a v ² n e c p /
 p c m j q i { x ² i g c t q o c p v k n i p c n 0 C l g u v c j q r f /
 l ² p { . c m ^a n ² p ³ u n ² p { g l g v p g m ^a p m k f g i g p g n p g m
 o ² i k u e u c m c f q w g i { n k u k m ^a l e v . c o g n { r g f k i o ^a t
 t ² i g p u l ² v h q u l n w o k p v c n ² c x k n i q u t g i g r e p .

D g p p g i { r q j ^a t y j k u n { o g n g w h e i i c w e o c
 i c l f ^a v . c n k i c l f c u ^a i k c n e f ² o k ^a v x ² i l g w O c i { c t /
 q t u l ^a i q p . i t » h M ^a t q n { k p { f d ^a v q t k d k v q n i p x q n
 i c l f e v u l v g l g p n i k ^a n v e t v e r ² n q u h j c f p c i { . u l » /
 x c n k p v n k i g p u g o d g t . o ² i k u o k p f g p p g m f e e ^a t c
 w f v e x e r c o k t g x l p p k M c p c f ^a d c p 0 C l v ³ v ² p g v g
 u l k p ² p q n { c p j u n ² v g o ² p { . o k p v c l g i { u l g t o c /

i {ctqñf. c o kpf gppcr k ²ngv j un³⁄⁴ngo ²p{g. fg
 dk qp{ j cpi | cvqu tqo cpvñf v o ²i ku j k² dc ngtgu/
 p² pm o Æm¹ dcp0 Ft0 J qho cp vcp¹ tc xqrv c i c | f c /
 u¹ i k cnef² o k² p ² u c vcp¹ t j ¹xvc hgn c vcp¹ x¹ p {
 hki {gn² v. Mcpcf¹ tc0 Gn u | ¾ Y kppkr gi dg o gpv ² u
 o kpv gi {u | gt o wñf u rt»d¹ n v dqr f qi wpk0 Rf j g/
 ngv tcnq w nk gi { nqeukd»n fg dk qp{ c | gt u o wp/
 n¹ v pgo d¹ fvc0 C | w³ p r kpe² t gungf gw ² u gndgu | ² /
 r² u² p² n ² tf gngugp dqpvcñ | qw nk c | ³ pgj ² | u² i.
 co k g | gp c r¹ n¹ a p ku hqi c f l c. c j q | |¹ pgo ² tv
 go dgtv0 N² r² ut n¹ r² utg nngmw gn tgi c r f p l c.
 co ¹ xcr o k g x l p p k w f v c 0 M² u dd gi { nku hct o qv
 xgw. c¹ qn ngtvk i c | f¹ muf¹ ucn rt»d¹ m | qw0 Gddg
 c | qp dcp dgrgdwnq w. o kpf gp² v gnxgtv c l² i 0 Gmqt
 n¹ w c. j qi { g | pgo pgnk xcn» hqi rcm | a u ² u o¹ u
 o gungt² i w³ p p² | gw0 .. u | gx¹ u¹ tqnc c u | qo /
 u | ² f c k | ¾ f u² i ² v ² u nku nqeukxcn dgo gpv c x¹ tqukc.
 a tw¹ c p k 0 O kpf gpnk c | v j k | k j qi { g | n¹ p p { .
 r g f k i o kpf gp wee¹ v m¹ p / m¹ p. o¹ u ² u o¹ u h h k n /
 xci0 nngmw o gi f qn i q | p k 0 Co kv o kpv hct o gt gn/
 xgu | vgw. c | v o kpv ngtgungf xku | cu | gt g | v g 0 X² i Æn
 o¹ t c rgi gn ngn dd j¹ | cn»m gi {kn g xqñ0 C x¹ mcn/
 m | a uk u | gmgo pgo j ci {vc p {wi qf p k 0 J qe { dg
 o gpv c j qn u¹ muf¹ v ² u Æ n g v p {k q w 0 O kpf gppgn
 ngtgungf gw. fg j k² dc0 Qw ug w f q w dqr f qi w p k 0
 i { ngt Æ v gn c | w³ p Y cne y tc. c j qn c 0 u | q r k i q p /
 f q m | a u Æ eugp f gu go dgtv pci {qp o gi u | gt gw² n 0
 Oc pci { xgi {gungtgungf² ug xcp. g | gpn¹ x Æ n v / dd
 j¹ | c ² u pci {qp u | ² r xci {qpc0 O kpf gppgm gmep² tg
 c xqrv h j c f pci { tgi i gn n guki qw u Æ ¾ c | Æ /
 ng² dgp ² u o ci c u | qn i¹ n c nk c xgx k 0 J c pgo ¹ {
 xqpc. pgo ku xqpc ukngt g. c | qppcn grj ci {p¹ m
 xgx k 0

Gi ² u | gp hngv f gw c | gung. xku | c nngmw kp/
 f w p k 0 C | cw» pci { ugdgu² i i gn tqdq i qw xku | c
 c | luo gtv Æ q p 0 c | qp c vgt Æ vgp. c j qn ¾ xgp / j cv

xcw²xxgn gl gn w[¶]p²i) kpf^kpqm vcp{^a|vcn⁰ C u^{3/4}v²
D²i d n pgo rgugmgf gw t^apm ugo o k xgu²n|. o gu|/
u|kt n dct^av^ai qucp rkuqi cwcm hgr²pm Y cney nk/
xkf^ai ¶qwedrcnk⁰

C| —u| » Hgrj kpf^kph p^{3/4}m²u gi {
o ci {ct dct^avu|^a uc. o gi gi {²d
hcvu| vknwo qm

[ctmqp. *ô ð

O kgn w Y cney »n x²i rgi dÀeuÀv xgpp²pm pgo
u|cdc f o gi hgrgfng|pk c|qnt»n c o ci {ctqnt»n cnkm
rj²u|cnèddtc v^{3/4}v²gm qn{cp xkf²ntg o gpvgm cj qn
o^at pkpeu ugo o k²rg hcnw xci { x^atqu. h^{3/4}n gi²u|gp
c|²u|cnkuctmhgr²0

Y cney »n²u|cnp{vi ctc. o kvgi { jcvkcv^{3/4}
o²th^{3/4}f p{k v³xqn^ai tc gukm Necun⁰ G|v c jgn{gv
3; 2: /dcp hgf g|vg hgn n²v dcr vkvc eucn^af²u hgrj ¶kv.
t^a c o ci {ctqm hki {gr²0 O^at/o^at j Àu|/j wu|qp^{3/4}
eucn^af rcnkm kv²u c n^{3/4}Àn²p{gnj g| n²r guv gr²i
l>nrtqurgt^arcn⁰

G|gp c xkf²ngp ku xcp gi { kpf^kp tgl gtx^aek⁰
cj qn c r wu| wv» kpf^kpqm c jcv^ai x²fgr²g crw
o gi j Àjcv^am o ci wnc⁰ C o ci {ctqmen^arcp/
f»cp²tpvngl km gi {p²j^ap{ kpf^kp eucn^af. g|gm
n^{3/4}Àn c| gi {km xgl²t pci {qp l>n o gi vpwv o c/
i {ctw⁰ Co knqt o gi n²tf g|v²m jqi { o k²tv ucl^av[¶]
vqvc gn c o k u|²r o ci {ct p{grk^angv. o ci {ctqu
n²tqo nqf^audc v^{3/4}vnl⁰

ô C| kuvpkv g|gnpgm c mw{c o ci {ctqncn[#]
ô nk^anqvc ô gi { ug cnet xrgo o^aun²r rrp dg/
u|²rp k o kpv o ci {ctwn vj^av pgngv ngrngw o gi/
vcpw^apk g|vcl^avu|qwpj²| p{grk^ag[#]

C| kw rvgrrgfw o ci {ctqm o clfpgo o kpf
dcr vk^am²u c|v^an[¶]m^a jqi { fce^atc c pci {qp

o ci cu ²u|cnk hgnx²upgm l>n nkhk gv fkm c i c|f^an/
 nqf^au0 Gf fki c| 3;47/3/4i ²x xqiv c tgnqtf/vgt²u.
 co knqt c dÀ c j qif cpn²pv ^{3/4}xgp^{3/4}w dwuj gmv c |cd
 r g f ki u^a| dwuj gmv hki gvgw0 C o ci {ctqm ^ateo n²uc
 pgo u| pv o gi . j co ctqucp gl c vgtÀgv ku nko g/
 tÀw kw ugo ngj gvgw o^at kpi {gph²/4f gv u|gtg|pk
 gttg c o ci {ctqm hgtj À}»f vcm o²i lqddcp ²u|cm/
 p{wi ctc0 Y kej kncp/w hgt². gn | ngi gi { euqo »
 go dgt P qtdwt{p^an o gi cncfv ²u o quv o^at kw ku
 xcp o ci {ct vgr. cj qn n²4 ÀndgnÀn j Àu|/j wu| qp^{3/4}w
 o ci {ct eucn²f xcp. gl gpn²f Àn jcto kpe^{3/4}w o ci^a/
 p{qu go dgt i c|f^amqf kn0 O ci {ctqm ux²f gm ²u
 p²o gvm vgr gf vgm eucm o gi gl gp c xkf²ngp. o^au
 dk qp{ pgo ngtÀw gttg0 P go eucm j gn²ku²i pgm
 x^atquqmpcm ukpeu o²i p{qo c. j cpgo dk qp{ c
 xcuÀt»nku eucm^a m qf q| pen0

Ngj kpn² dd c h²/4f o xgn²ugp n²f Àn vglvgt²o gr²u/
 ugn hqi ncmu| pcm ²u c vglu|pv n²v vj gtcw»xcn
 xku| kndg c ngi n²4 grddk^a nqo^a utc. Uj gndtqnm0c0

C o ci {ct dcr kuv^a npcm gl gp c n²4p{²ngp
 vgo r nqo wm xcp. kunq²v ²r²gvgm ²u gn tgn²vj c/
 »cp gl c pci {qp ²u|cntc vqiv vgr. u|kp²p rtqu/
 rgt^apk hqi0 MÀ²p^{3/4}ugp l» j²g xcp Uqo qf{ L>|ugh
 hto gtpgm cnko^at gffki ku u|²r gtgf o²p{gnv²tvgr0

C y cney k u^atp{xqpcn²p f²ipgm j cncf wpm
 Vqv ngki0 Vqv ng wrcf qpn²r gp xcuÀk euqo »r qpv
 ngppg. fg j c xcrcnk c|v j ku|k j qi { gl wf qo ku ²p
 o kn{gp pci { x^atqu. Ài { cncr qucp eucn²f kn0 Kv
 pkpeugpgm gwt»rck hqi cm cm kw o²i o kpf gp c
 ng|fgv ng|fg²p xcp0 C xcuÀk euqo »r qpv pgo
 o^au. o kpv gi { lf d>n v^anqiv x^at»vgtgo. co gn{dg c
 pci { j kf gi gug²p v²/vk gp^{3/4}w go dgt vcn²p dngl²t0
 C n²v xcuÀk xqpcn vcn²mu|^au^ap^an xcp o²i gi {
 xcuÀk/wc» ku. co gn{gv lqddtc ²u dntc c n²v xcuÀk
 u²p hgt² ngj gv k^ap{c²pl0 Mku² v^axqredd c xcuÀk
 t u^ao^atc gi { nku j^a| km²u g| gn x²i gi0

C nēpcfēkēm c|v o gu²rkm jqi { ¶i { ng|f fkm
gddgp c| qtu|^aidcp. ô co gn(o quv u| ãrgvkm ô
o kpf gp. xcrcō knqt Vqv ng ku pci { qp pci { x^atqu
ngu|. ngj gv jqi { ki c| wñ xcp. eucm ngi { gp c| go dgt/
pgmvãtgnō g nks^atplō

P²j^ap{ »tck x^atcm|^au w^ap hgnãnj gvãpm c|
gzrtguuxcuãtc²u tqdqj cwpm Ecpqtc hgn²0
Grãtlãm J wo dqrv x^atqu^av. cj qx^a ²u| cnt»n u| kp²p
xcuãxqpcñ hww dg0 G| gi { xcuãk p²i { u| ¾ pgm
x²i u euãeuc. co gn(t^apm o ci { ctqntc p²| xg eucm
c|²tv pgxg|gvu. o gtv c n^¾gr²p xcp *O kffng Ncng*
²u c » rctv^ap. c x^atquñ dcp vãdd o ci { ct eucrf
vñ^arv o gpgf²ngv0 *Kw* xcppcm *Mkuu* Cndgtvgn *Mgp/*
f m L| ughgm *Mctuck* Nclqu²m ²u o²i vãddgp0 G| gm
gi { u| gt gp ngu| cñfvcm Ycney »n ²u gttg jã
| »fvcn0

C xqpcv pci { ugdgu²i i gn tqj cp vx^a dd0 Gi {/
j cpi ã o gi u| qnuw v^al²m ngi hgnlgdd *O wgpugt*
i {¾p {¾ cr^aw^ai c v pkm u| go dg. c| w^ap *Gpi gn/*
hgf n^¾xgvng| km co gn(o^at vku| vc p²o gv vgrg ¶²u0

Kppgpv n ng| f xg ngi kpn^a dd p²o gv vgrg gm n^¾/
xgvng| pgm u c| guvg o^at ngu^amv. co knqt dghwqv
wpm Ecpqt^adc0 Ecpqtc o clf pgo o kpf gp t²i k
v²tn^rrgp u| gtrgn o²i qn(cpqnu^p ku. cj qn ngi/
hgnlgdd gi { /n^¾v x^atqu jgn²v n^¾vj c| wñ0 Ucunvqpp
²u Y kppk gi n^¾¾w c n^¾¾²r jgn(gv hqi rñlc gn ²u
xcrcō knqt xcrcō dcp c| v jkv²m jqi { pci { xcuãk
n^¾¾²r qp v ngu|. co gn(c| gi²u| xk²m hqti cm^av
hqi lc kt^ap { ¶cplō C| go dgt ¾pn²p { vgrgãñ
pci { x^atqutc x^at. fg dk qp{ eucm n^¾v uqt j^a| cv
vñ^an ²u c| | cn x²i g0 Oci c c u^amqfc c l¾ tgo²/
p{ gkpgm n^¾u| ãñ0 Go grvgu. o qf gtp ²r ãrgv0 Fg c
tgo²p { gm grj gtxcf vñ0 Wpcm cu nku l²u| gn0 O kpf/
¾u| g n^¾v n^¾pc k xgp²i n lg xcp. cj qn p{ qo qtã^a/
i qu² vgrngvngj gvñer plō

O^aupcr gi { gpgu^p f²rgm x^ai wpm u o gi ugo

^a nwpm [qtmqplk . co gn{pgm n¹/₄ gr² p xcp Qwj qp
vgrgr g. co gn{ gi {kn^g c r^gi pci {qdd o ci {ct crcr[¶]
v^a uqnpemMcpf^a dcp0

[qtmqppcm c|²tv xcp pci { lgrgpv u²i g c o c
i {ctu^ai u|go rqp^la d>n o gtv gl c0 xcu^Åk n¹/₄ rqp^lc
c| gi²u| xk² n^gpm cj qn ki gp uqm o ci {ct vgrgr gu
r^{en}kn0 C| ^À nkx^a pf qtn>m u|gtgvgm kfg l³/_{ppk} o gtk
r^gi c¹dd o ci {ct i c|f^a n^gq| ngt^Åj gvgm gn fqn/
i q|pk0 Uqm wi {cp r^epcu| nqf qw. j qi { c| kfgi gw
i c|f^a n^a n³/₄ddgv ngtgugm co kpgm c| kfgxcn>ulcm
c|v c o ci {ct^a|c^v v cf^la m j qi { c o ci {ct i c|f^a m
p²jc v³/₄dd) j qphk^a tucv ku h^ghqi cf pem o kv c o gp{/
p{k^g u| ^Åmu²i xqpc. gucm c|²tv. j qi { ngtgug^v jv
lwcu^a m ngv0

C o ci {ctqm v^{en} m^g| > j gn{g Mqp{j c Hgtgpe
d^a v^a pm j^a|^a pem c ngtvg. cj qn c l¹m v³/_{k²} dgp ng/
j gxgtgfp gm c|qm c| cv{ch^{em} cnkn pgo wf pem
o v^{pn} j q| lw^{pk}0 Kgl³/_{ppgm} c hcto gtgm kv x^a r^u|/
u^a m nk ngv0 Mqp{j c Hgtgpe pci {qp t²i k qwj qpk
vgrgr gu. ^a o d^a t pgo c| gm ^Åw³/₄ m n¹/₄ ^Ån xcn>0
Dktvq¹ v c|qpdc^p o quv o^a t d²tdg cfv^c ²u dgn¹/₄/
v³/₄ ³/₄v c x^a tqudc. cj qn jcl>lgi { ^Åi {p³/_{mu²} i i gn ²u
o^a u cf o k^{pk} v^a ek>uf qn qm^{en} hqi r^{em}q| kn0

Mqp{j c d^a v^a pⁿpcm tqo cp^{km}wu o ^Ån^{lc} xcp.
co gn{t n gl gp c n¹/₄ p{²ngp uqnev dgu|² rpgn0 Co k/
nqt o²i h³/₄ f gv v³/₄ v. n¹/₄ p³/₄ u n¹/₄ ^Ån² p{gm n¹/₄ ³/₄ w
kuo gtngf gw o gi gi { kpf^k ph p³/₄ mgn² u c d^{ct} v^a
u^a i qvc| >v^c ku v^{ct}lc xgrg0

ô M^Åpv fqi q|wo c j qo guvgcf qp. ô ngl fvg
gndgu|² r¹ u² v ô o quv jcto k^{pe}gi { ²xxgn gl gn w0
C| kpi {gp n^{er} qw h³/₄ f ³/₄ p pci {qp uqm xqiv c| gtf 0
co gn{ dgrgp{^Å v c pci { gtf u²i dg0 Mku i c^{nk}d^a dcp
r^{em}co ²u ²r rgp x^{eu}qt^a tc n²u| ^Ångo 0 Gi { nku
h|gr¹ ngv nq^v xcu| vqwo. ²u co ¶i c r¹ dcudcp h^{tt}v
c| ²vgn cffki nko gpvgo n¹/₄ ^Åp²|pk0 Pgo o gu|g

v rgo t^a o o quqn(i) qw gi { nku vku| v^a u. co gn(c|
 gtf pgn gi { km p{ $\hat{A}x^a$ p{^a p^a n j \hat{A} » fqw o gi 0 Gi {/
 u| gttg eucm h³/f dg i { $\frac{3}{4}$ ngtgf| gw c n¹ dcp 0 C dqnqt
 u| ²x^a n² u nk² r gw dgn rg gi { j cvro cu vgo gv
 kpf^k p 0 F^u| gu vqmdqm² v² n² gu^u f gw c h² v. c|
 ctec nk xqrv h^u vxg² u n² | ² dgp c r wunc. co gn(gn
 \hat{A} { n² r gi g^u gw o k^v j c dqv r gw xqrp 0 C ddcpc c r k¹
 r p^v dcp c| xqrv c| ² t| ² ugo. j qi { c j c¹ n n³ 4 g^u/
 f km h² o 0 Gm² r| g^u j gv v³ xqⁿ i dcp ugj qn go dgt/
 hc. cnk n ugi ^u i gv n² r j cwco xqrp 0 Dk qp{. o k
 v t² u. vci c^a u. o gpgm² utg i qpf qnco. dg cnet/
 vco xgpk o ci co cv c| gtf u t l² dg² u o gi x^a t^k
 c p{ w¹ qf cm cu dd k¹ n^u 0 C| kpf^k p c| qdcp
² u| tg xgw² u gi { gpgup h² o l³ 4 0 O gi cf vco o c/
 i co cv c uqtuqo pcm² u dgx^a t^v co 0 Rt» d^a n² xrgo
 dgu² ni g^v k fg pgo w¹ w¹ m o gi ² tvpk gi { o^a u⁰
 C nwp{ j » o h² k² k^v gw 0 Tgo gi xg gpi gf gm gungf/
 vgo 0 Dgo gp v¹ m gi { \hat{A} w 0 C| ² v² n u| c¹ a¹ t^c h² r¹ k¹ { gn.
² u o w¹ c. j qi { ² j gu 0 C| w^a p r² v¹ c| cu| v¹ qo /
 j q| 0 C l² r² go v n c| v ugo w¹ vco. j qi { o kv euk^a /
 r¹ n 0 T^a o plquqn(i) qw² u gpi go o ci c o gn² \hat{A} ng/
 vgw 0 Mgwp j q| | ^a n¹ w¹ p n 0 Pgn² o wi { cp gm gpv
 o kpf gp ² x^a i { co. co k^v c j cteku h p³ 4 n¹ v¹
 vco. fg c| ² tv gwgo xrg. pgj qi { x¹ c¹ o k dcl
 r¹ i { gp 0 C| ² v² n² | ² u w¹ p o gi t^a | v c n² | go gv.
 d^c t^a w^a i qucp p² x² gw² u v³ / ddu | $\frac{3}{4}$ p{ qo v² n¹ qucp
 g| v c n² v u | » v² kuo ² v² ng <

ô *Hrqvki Enqwf. Hrqvki Enqwf* 000² u gn
 v³ xq| qw 0 Eucm n² u dd w¹ vco o gi. j qi { g| © u /
Hgij v lgrgp 0 Co k^v gn pv c| gtf u t l² dgp. ² p
 o c| gtf dg xgvgwo o ci co cv ² u gi { hc c¹ w
 f k¹ gt gi xg v³ 4 n³ 4 vgo c| ² lu| c¹ n¹ 0

ô J co ctqucp nk¹ gt \hat{A} n. j qi { c l² r² go tg pgo
 pgo xqrv ugo o k qnqo 0 Gi { d^c t^a w^a i qu kpf^k p /
 v³ 4 | u h p³ 4 ng xqrv c n¹ v¹ i c^v » o. cnk n² u dd gi {
 c¹ m¹ qo o cn dg lu xqpw [qtmqpd. P ci { \hat{A} pgr /

u²i gmggn hqi cf³v³m c h²p{n²r²u|gm rghqvi tc/
h²n³m²p ku xgwo o ci co pcm gi {g³ P²||g kw
xcp. xk²u²a²rlc o gi hki {gm gup²u o qplc o gi
u|k²v²p. jqi { j c jcto kpegi {²xkxgn g|gn w c xc/
f qo dcp v²m²u| km xgrg. o ci c pgo tgu|ngvgw
xqpc/g v r²A#

C| —u| » H²ij c|qpdcp pgo h²rglvgw gpi go
gn p²j²a²p{²x o A²xc A²lc dg²a²n²q²w j q||^ao²u
c wtc n²tv. jqi { euk²a²rlcm pgnk qn{cp i c²wu²v.
o k²v c²ppcnk²gl²p. o gtv pci {qp ¶|rgw c v²4|u/
h p³/m²i²pgn² C| »c c|v²p o k²f gp² x²dgp gi {u|gt
o gi r²q²ic²q²w²u ngf²n²{gugp gn²/n²/w²Am p²j²a²p{
»^at²o

~ . u|gi²p{ t²qo cp²kn²# C t²qo cp²kn² o^a|c
o k²f k²n²dj rghq²u²q²w c v²4|uh p³/m² r²o Ngi w»dd
o^at n²4³/p²u²i gu o w²netw²a²dcp r²wco² P go
j q²flc o^at c u²r² v²muk²cn²q²o Qn{cp. o k²v xc²o k
k²gxcn²uk² 3/4gi o w²n²u²o P²j²a²p{ gu|vgp²glg pgo
l³p o^at dg c x^atquc. fg c|²tv wfqo. jqi {
o²i²n o gtv c r²rqm v²4du|³4 ¶|vcm o^at t²»r²o
O gi ¶|v²m c|²p j²kn²st²k²o cv ku. c|³4gi v²4|uh p³/m
dct^au²u²a²v gi { k²g²x²gv f³/w o ci {ct go dgtt²gn²o

O²i gi {²tf²g²ngu o ci {ct euc²n²f r²cn²km [q²tn²/
K²pdcp. c U²czq²m² cn²kn²t n c n²4grk U²czq²pj²kn²
gmgt²gu|vgn²n²o C|³4gi U²czq² d^aeuk gl²gp c n²4/
p{²ngp xq²v r²quco g²vgt. gi { f²qo d²q² r²cn²q²w q²fc
l^atv o k²f g²pnk c r²x²gr²k²tv²u ¶| { o c²tc²v h²pp c
p²gx²c v²tn²r²gp²o U²czq² f²qo d²lc²o Fg pgo euc²m gl
c p²gx²g²vgu²i²g. j²cpgo c|. jqi { c n²p{c U²czq²
O cv²k² c| g²nu gi {g²vo gv x²i|gw o ci {ct r²a²p{
M²cp²f^adcp²o M²g²x²gu. gi {u|gt r²a²p{. cnk pci {qp
l²n d²gu²n o ci {ctw²n fg j²k²dc h²ci²cwco. pgo
u²q²nev c²netv g²n²tw²pk o ci^at²»r²o O k²v v²p²¶|»p o /
n²4³/w gl²gp c x²k²ngp²u co kn²qt n²u dd. cw²»p c|
k²f²k²p²qm v²t²Ä²rg²v²p n²gt²gu|v²Ä²n wc|w²pm o w²c²w²m
c|v c j²gn²gv. c²j²qn c²ppcm k²gl²p q²mcwc c n²tm²/

ner0 Kv v³4v²pv jqi { gi { cmerqo o cn tggpvgvu
 ul²rkj ct v³ o cfv. c ul²rk²ul gi {ul gt gp h³4mer v
 c hc²r³Ängv²u o ci^axen uqfqtvc0 C hc²ven o ci {ct
 r³p{ j ulgu gt hgu³uugn vctvwc gi {Äw c nku
 Ört»u³i qnev. cffki. co³ ugi³u²i²tngl gw0 Uqm
 i {gtgm²ng²v o gpvvgw o gi ul kpv h³thcu d^avt/
 u³i^axcr0

[qtmqp m³Ä³pdgp ngfxgu nku x^atqu. o kpf gp
 m³Ä³p³ugdd pci {qdd ki²p{ p²m³Än ngi hgrlgdd c| v
 ngjgv o²i o gi go r³gpk jqi { *Rcvkem* lqjp ic|/
 fci n³pcfcck xcfcumtvgv tgpfgl gw dg c x^atqu jc/
 v³t^adcp0 C| |kn³m²u ul ctxcuqm gi²ul ul g³ff gm
 ng³ppgm c| qtu^ai³Ätc0 C m³Ä³pe n³pcfcck Oc/
 i {ctqtul^aiicn ku ngtgugw n³re uqrvv²u v n³Äpm
 h³e^apqnev jql cvqw0 C o ci {ct h³e^apqm o gi ul qm/
 v³m c xk²ngv²u c| ³4gi Ät c n³vi cv»n³pcm dÄu/
 n³p o wqi cvc ngv0

O kpv hc³pcul v³nwo qv pgo ul cdcf grj cni cvpk
 jqi { c *I qurgt Okukap/pcm* xcp kw vgrg. cj qn
 jqr³ tqngt³wgm c ul gpv j³4 r³4i m i ct^a| f^an/
 nuf pcn0 O gi xcp o kpf gp v³ul vgrgv dgppgo xcr/
 o gpp{ k xcn³uhgrngl gv k^apv. fg co kv gl gm euk/
 p^aipcm c| gngp ki c^ap r³| qpi o kpf gp²t²ugo.
 cpp^an ku kpn³dd. o gtv gl gmpgm c ul²rj^a o quqnpem
 ukngtÄvp²j^ap{ o ci {ctvku j cvm vndc ngt³gpk0

G| gnt n c ul gpv j³4 r³4i u³Ät n c ul gpv²ngm/
 x^at»nt»n o^at uqnev³ vcm Äi { c| co gtn³ck o kpv
 c| gw³r³ck r³rqn0 *OeRjgtuqp* cuu| qp{. ic| fci/
 co gtn³ck p xqnv cnk gi {ul gttg eucm xcn³ucr/
 r³Ä³utc cfv c hgl²v0 C dkdrc uhqto^alc ul gtlpv
 cnetv c| go dgtngv o gi tghqto^aipk0 C| v j kfgwg.
 jqi { gi { cmerqo o cn o gi ul^amc v c ul gpv²ngm
²u h³4xk³i q³qvc ett»n jqi { c| go dgtgm jgn/
 vgrp Äqp ngtgukm c| Äx³4 Är³u0 C dkdrc ul cxck
 ul gtlpv c| crquqnm h³4ftg xgvg²m o ci vnev. c

h³/f³/p xqpci nqwm j³/o r³/4³/4 vgm co ¶ grxgu/
 vgw²m ³/pwwf cwnnev ²u cmmqt c u|gpv²rgm o gi/
 u|^amc. ngv. gi {u|gttg o kpf gi {km o^au p{grxgp
 ng|fgw dgu|²rp k u c|w²p gm gpvgm j kfgpk c
 xk^ai o kpf gp v¹a tc c u|gpv ki²ngv0 ëKf g ngm
 xku|c²tpki ô j kfgwg c| cuu|qp{. ô ëc h³/ftg
 ngm xgvpk o ci w²nev cffki j³/o r³/4³/4 pk cffki n¶
 pq|pk o ci w²nev. co ¶ grxgu|v²Am ³/pwwf cwpnev
 u o kpf gp i qpf qrcwpm ³/u|ghqt c t²i lgmgr0 Gmqt
 o gi lgrpkm c u|gpv²rgm ²u o gi u|^am dgpp²Apngv0-
 C u|gpv²u gi { r cuu|w^apcm k{gp h²itgo ci {c/
 t^a|^auc j kj gvgv² gtgf o²p{v x^anqw n0 C| À vcp/
 pcm c u|gpv r²ngx^at»n^apcm j cvro cu v²dqtc v/
 o cfv0 Gi { nleukv o gi v²r^a|v vi {cp c xcn^aucrc/
 r¶» p j ¶pgx²v gi { h²teuc nercpf0 C xcn^au/
 cr r¶» p gi { kf tg grv pv ugpnk ug w²vc. j qn
 xcp0 C h²t²v n ku grx^anx. o gtv c u|gpv fq^aqm
 cpp{k²c gr^aqi r^an²n0 O^at o kpf gphr² ngt gugw²m
 co knqt gi {u|gttg eucm xku|c²tv ²u gm gu²ng.
 j qi { o gzk^ak dcpfk^am tedq^am gn cnkm tgwv²g/
 vugp o gi n¶p^a|v²m ²u xcn^aucp^apcm xku|cxq^a/
 u^av n²/xgvn²m v r²0 c|qpdc²pgo gpi fgw u xc/
 rco k tqo cpv^amw Àqp ukng²v pgnk o gi o gpg/
 m²Apk0

G| pci {qp u|²r gp j cpi|qw. C xcn^au j ¶xgk
 m²Apdgp ku o^at u|gpv²gm j kfgw²m ²u c j ¶xgm
 r²i k²lc Appgr gng0 C| Appgr gng²uv c|qpdc² h²/
 euc j cpi qm |cxct²m o gi0 K^av ku. qw ku ctt»n
 ng|fgw dgu|²rp k j qi { c u|gpv cuu|qp{v r²w^am c
 n²tf²ugu kf dgp. pgo ku O gzk^adcp. j cpgo c|
 Gi {gu²v²nco qndcp. u v pgo ku gi {gf² v j c/
 pgo gi { u|²r h²thk v²tucu^ai^adcp0 Gtg w²pc
 xgvw²m o ci w²nev c fq^aqi pcm nk²gt²v. j qi { c
 o gzk^ak dcpfk^am j gn{gw Ot0 Qtxk^aqp. gi { pc/
 i {qp u|²r t^af²k²v² tci cfvc gn c u|gpv cuu|qp{v
 ²u Nqu Cpi grgudg ek²gng. cj qn dqf²qi o²|guj gvg/

ngv v^{3/4}n^{3/4}v^{3/4}gm gn ngwgudgp0 C u| gpv cuu| qp{ crkdkv
ngtgugw 2u nksn¹nc c o gzk¹k dcpfk¹m hcpvcu| /
vknwu j ku>t¹l¹v0 C j¹xgm vgt²u| gvgugp c ngr¹r /
ng| ngv t¹i cm c| »n¹pcm nk¹nq¹m nk 2u vx¹a dd
ko¹fl¹mc xcn¹uc¹r r¹»p v0

Co gtn¹ dcp cpp{k xcn¹uk u| gmc xcp. jqi {
pgo ku v pv xqpc hgn fg hgrj¹x¹m c hki {gm go gv
t¹. jqi { gl c v²xcp pci {qp uqm o ci {ctv ngt¹v
c j¹n¹l¹dc 2u ettc kpxk¹ncm jqi { p²|| gm x²i ki
gi { kn| gp u| gtvt¹uv. co gn| gv guvg u| qmcm tgp/
fg| pkc| gi {knn¹4 grkgtf dgp0

Qf cj clcw¹pm c| cw>xcn 2u c| gi 2u| n¹4p{g/
| gv qn| cp o ku| vknwu. jqi { i {3pi 2dd kf gi | gv go /
dgtngv o¹t gl ku jcv¹m¹dc ngt¹v0 C| gtf dg
x²n¹up{ 3¹x²p{ xg| gv. cj qn eucm p²i {3/4 go dgt
l¹t gn gi {o¹u o gmgw0 Ugj qn ugo o k xk¹i. c nq/
tqo u^{3/4}v²i dgp eucm vcrqi cv>| xc ngrj gv gn tg/
lwpl0 C| w¹p gi { vku| v¹utc ngt¹v¹pm cj qn gr¹i
pci { u¹tev¹ n¹mq¹wcm hgr0 G| o¹t dgn¹n o gi
xqiv xk¹i¹x¹c. fg u| kp¹v¹p ki gp u| gi 2p{gugp. Ai {/
jqi { eucm l¹ij qo¹n¹ fgtgpi gw dgppp0 C u¹vt/
dcp cr¹euq{ rcfqm o clf j¹wn gi { go gr¹p{.
cj qn qti qp¹v. pci {fqdv 2u v^{3/4}ld h¹x>u u| gt¹u¹/
o qv jgn| gl vgm gr0 C| go gr¹p{ gn w p²i {3/4
n¹dp{k A¹gu jgn¹. cj qx¹ u| cm¹v j¹p{vc¹m c|¹lc/
vunqf>m u¹o¹tc0 C u¹vt vgv¹l²p²n n¹4An rg
ngrjgvw hgu¹gpk c rqp{x¹v Ai {jqi { c|²tf gm
nf m pci { t²u| g n¹x¹n o kpf gpv n¹vj cxq¹0 Dk/
| qp{ pgxgwg¹m n¹eci vc¹m c| gi 2u| gv nki A¹p{qn¹m
fg gl ugp¹nv ugo | cxctv o gi 0 MApp xcp¹cm c
jkgv¹pgm jkf gv¹m fg o clf o gi v²tpgm c|²tv
pgo ngti gv¹kn gn ngv

Co knqt o¹t pci {qp n¹u tg l¹tv c| kf . c|
gi {km rt²f kn¹vt gmgl fgw jquu| cucp dgu²rp¹0
l p¹gm jcp¹qp ek¹nv c dkd¹d>n o clf o kpf gpv
3¹uu| g/xkuu| c hgeugi gw. co¹ qf c²tv. cj q| c

r cuu| wnj q| . co gn(c| gi 2 u| xcn^a uhrgng| gpgm c|
crr lc0

M⁴ dgp 2 pgnul^a o qnev tgpfg| vgn0 G| gp c n⁴/
p{2 ngp c| go dgtgm grⁱ i² grj ci {cvqwm o clf/
pgo o kpfki gi {gf Ñn xcpcm c u| cdef dcp. Ñi {/
j qi { c | gpg n⁴pp{gp j cvm^a dc ngt⁴ k c| kf g/
i gknv0 G| c | gpg r gfk i gi {gpgugp ettc xcn0 U⁴/
pcm c h⁴x»u| gtgm c| w^a p f³/₄ pgm c f qdqm xk/
u| qp v c| qti qpc xcrc0 k nⁱ { j cpi wcvqv vgtgo v0
U| cd^a n| qu kf n⁴/₄ pⁿ pv hgrj cpi | km c j⁴ k n⁴ p⁴ gm
ëcmgnlc. cmgnlc# nk^a n^a uc0 Qn| cp. o kv c| kf /
n⁴/₄ pⁿ pv o gi Ñw» nqtd^a eu² u c u| gp xgf ngr/
ngntg0 C| go dgt pgm 2 t| 2 n⁴ k gmⁱ dwpcm 2 u Ñt gup
p² | o ci c gr² #

O gi f³/₄ dgp xg j cmi cvqo gi { o ci { ct go dgt
grⁱ gu² r² v. cnk ng| fgwgi gu cpi qn p{grk gp o qp/
f qwc gn ëo gi v² t² u² v0 Gi { o^a ukm c| v dgu² ng.
j qi { c| K⁴gp n⁴ gi { gm g o kpf gp dgvi u² i d n o gi /
i { » i { ⁴ qwc0

G| o kpf eucm gn n⁴ u| Ñrgv0 Co knqt o^a t j^a /
tqo / p² i { » tcj quu^a ki c o qpqv² p² gm² u 2 u c
nⁱ d⁴ » | gpg grⁱ a i { cu| vqw o kpf gpnkx. cmqt ng| /
f f km c u| gtvt^a upcm ki c| k r² p{ gi gu t² u| g0 Gn /
l³ p⁴ p⁴ gm c j⁴ xgm r⁴ x⁴ km o ci wnev c u² p^a tc 2 u
j³/₄ r³/₄ p⁴ k ng| fgpn0 C| ëcmgn^a vⁱ o^a t o k⁴ /
f gpnk o ci c ku xgn^a m nkcd^a rlc 2 u kf n⁴/₄ pⁿ pv c
xkⁱ i n⁴ gi m⁴ r⁴ p⁴ d⁴ dd p{grk gp hgm² ncp⁴ cm ëQj
l³/₄ gn u| gpv² r⁴ gm — t K⁴gp i 0 C r t² f kn⁴ vqtqm ng/
o gppgm n⁴/₄ 2 l⁴ m ô eucm j k r p q w t³/₄ ngv cmcm c| /
pcm gttg c e² rlc ô u c| gmⁱ dwv go dgtgm u| g/
o² dg p² | p⁴ gm c h⁴ Ñm o³/₄ w c| gtgnv p{qo nqf /
l^a m 2 u cffki u| wi i g^a n^a m cffki 2 pgnr⁴ p⁴ gm
pgnkm co ⁴ x² i n⁴ gi gm⁴ Ñp⁴ gm c h³/₄ f³/₄ p 2 u n⁴ plw^a /
dcp. grⁱ r² m² i w^a dcp xqpci ncp⁴ n0 G| gn⁴ v c| w^a p
o^a t ëo gi u^a m⁴ w⁴ c u| gpv² r⁴ gmⁱ o kv c j qi { j k /
f g⁴ km 2 u o^a upcr gi { u| gt u| excmen gm qp f l^a m

o kpf c| v. co kv gddgp c jkrpqvkmw^a nqo dcp² tg| /
vgn² u lcpv³ | k^a ncn0

Kc|^a p o kpf gp u| cdcf u^a i pcm j¹ kxg xci {qm
f g g| pgo u| cdcf u^a i. g| o^a t u| cdcf qu^a i 0 V^{3/4} /
x² pp {gn ngnpgp gnknpcpk g| gngv c o cpr w¹ ek^a n^a v.
co gn| eucm ctte xcn». jqi { c| gi {u| gt^a tv^a vcp
go dgt gngv l² rtgxg| gu² n0 Co gtn¹ dcp c| qp dcp
o kpf gpv u| cdcf. vj^a v pgo n¹ j gv gngpg ugo o kv
ugo vppk n¹ i h¹ r¹ gdd o gi n¹ j gv rt^a d^a rpk o gi /
i { | pk c l² rtgxg| gvgw go dgt gngv 0 O ci co ku rt^a /
d^a nco gi { / n¹ v kn| gp o gi v² xgu| vgw o ci { ctten
qnqucp dgu² rpk 0 O kpf j k² dc 0 C n¹ m² dgp o² i
uclp^a n^a v gpi go² u ctte ki { gng| gw t^a xgppk jqi {
c| gi { gw¹ p^a x^{3/4} v¹ xcn^a utc v² tlgm^a v 0

! ll² n o^a t l^a xcn gm^a n^a v co kn¹ t c m^a v^{3/4} u
kn¹ v¹ ku| vngv n j c| cv² tv^a p m dgd^a v¹ w¹ p m c|
a i { v¹ p n¹ d. jqi { o^a upcr n¹ t^a p o gpl^a p m nk Qw¹
j qpkv^a c n¹ epcf ck o ci { ctu^a i gi { km h l² u l² dg 0

C n¹ epcf cko ci { ctqm^e Qwj qpⁱ / c

Qwj qp. *ō +0

Qwj qp jcto k¹ ep² i {² xgu o ci { ct v¹ n¹ r Mcpc/
f^a dcp² u¹ i { pci { qp t² i k¹ gm u^a o v¹ 0 C|² tv ku xcp
pci { lgn¹ pv u² i g. o gtv c| gnu v¹ n¹ r gugm o clf pgo
o kpf o gi o ctf v¹ cm c euc¹ fqm kw xcp¹ cm² u c
n¹ p² n¹ gp o kpf gpnk o gi xcp ctt^a n i { | fxg.
jqi { g| c0 xk² m o ci { ct v¹ n¹ r v¹ utg o² i o kpf ki
pci { qp cm¹ cu 0

Cjqi { c| cw^a p m g¹ j ci { lc c x^a tqv. n¹ g| fgvdgp
gf¹ i vgo² n¹ v¹ gp. u v u| kn¹ gu xk² n¹ gp h¹ w¹ q¹ w¹ p m x² /
i ki 0 C| w^a p l^{3/4} v o^a t p² j^a p { hcto. co gn| dk qp {
pgo uq¹ n^a v h¹ k¹ g¹ j gv c w¹ rlf qpqu^a pcn0 *Mqp* { j c d^a /
v^a p m cnk c| cw^a l^a xcn xkw. gm qpf qvc. jqi { dk
| qp { kw ku n¹ j g¹ p² p gm o ci { ctqm f g¹ v c| gnu

vgrgr Ān m pci {qp l>n 2tvwgm c h̄4f j 3/4 2 u eum c
l> j gn{gnv x^anj cw^am nk0 G| gm o gngw grj crf vcn0
Co kdgp pci {qp ku ki c| wm xqn. o gtv kw dk qp{ pgo
uqmvtgo o gi 0

C| w^ap c xkf²m o^ak kpn^add dct^av^ai qutc hqt/
f w0 U| grff f qo dqm j clqpcm gi {o^audc. u| kpv pgo
ku j ku|k gn c| go dgt. j qi { kw. cppcm kf gl²p cpp{k
j cvm cu gtf xqn0 Co kv c h̄4f gi { nleukv lqdd.
qw o^at o gi ngl f f km c| uo ci {ct vgrgr gugm dkq/
f cm c0

Gi {/ngw j 3/4 dg ku p²| Āpn0

Hctncu²np^an xk kgn^apm gn u| 3/40 C| 3/4gi. v̄4 3/4
t3/43/4w go dgtng o quqn{qi xc u| crf v gr²pn0 P ci {qp
3/4 Ānc n^aqi cv^awpncm fg pgxgxg vgw j q| |^a<

ô O^at eum pg p^aro vgu²m 2²tf gm fpk c t²i k
f qn qnt>n o gtv kw c| cuu| qp{ xkugk c pcf t^ai qv 2 u
c| u^alc xcp lqddcp hgn^ai xc#

C| 3/4gi p²pkng pgxgv nēci j q| |^a 2 u c| w^ap
grdexu²rk j qi { c| xkf^ai wncm o^at x²i g0 Kv ngl f/
v²m kw cnetpcm o gi j cpk fg c h̄cvcnm o^at hgn/
eugr gtgf vgm 2 u wrcf qpn²r r gp m xgl vkm c| ki c| k
i c| fcu^ai qv0 | j gl c| qpdep. c t²i k h̄4f j 3/4. pgo
gpi gf pgm j q| |^ap{ Āpk0 Kv o kpf gpv m ey k^ancm
c ugo o kd n o kpf gpv m xct^a| uqncm gn. vj^av
co ¶ 2²pgm o ctf lq ku ¶ {0

C| w^ap o wqi cvcn0 C| gu rnc^au p^anwm ku
h̄4f dg^auqw i 3/4 3/4 xqn. o kv o kpf gp Āv²4 p²n qw
c f qo dqf cmp. j qi { ëpg 2²tlg c j kf gi c u| gi 2²p{/
u²i gv̄. ô cj qi { u| 2²r o ci {ctqucp hglg| k nk o ci^av
c| cuu| qp{0 C o^auqf km j^a| o²i kw xcp. pgo f n̄
3/4u| g. fg o quv o^at dk qp{ eum nro tc u o kpf gp/
h̄ng »eunc j qm kv vctvpcm dgppg0 C| Āl j^a| xgv/
o²p{gu ngtv n̄4 gr²p 2²ngungf km 2 u xcn>dep pci {qp
u| 2²r. pgo j k^adc dĀu| ng t^a c| cuu| qp{0

ô Oquv o^at n̄4 Ān rj gv p²| pk fg co knqt nk

l̄w̄p̄m ô dgu²rk ¾p vgnv̄p ô dk̄qp{ pgo xqiv
ugo o kxgnug fleugn̄f p̄k̄0

ô Fg pgo xci { o km o k o^at qn{cp u|gi²p{gm
ô h̄n{v̄lc v̄x^add. ô xqiv o^at jcv h̄f̄f̄p̄m ku. fg
c0 i{gtgn̄m o k̄pf̄ki h̄p̄p w̄gm²u c|w̄p̄p gr̄k̄w̄gm
gi {gv̄gi {gv̄0 V̄gu|km n̄v̄pk kw xcp c v̄cm̄qt. gl|gn
f̄q̄n̄q|w̄pm gl̄ o gi c eu²r̄ni²r̄# K̄w̄ o gm̄gw̄g c| Āgu
jgn{ c| cw̄»². fg gl̄v̄ ku gr̄k̄w̄g c h̄k̄ p̄gm̄p̄m eucm c
dci km̄euk o ctc̄fv̄ xku|c. u|gi²p{gu. fg l̄># L̄» xqiv
p̄gm̄p̄m jcto k̄pe²xxgn gl̄gn w̄ ku. km̄gw̄x̄g l̄» rgw
xqipc. j c rgwxqipc#

O w̄qi cv̄lc. c fku|p»kv. c v{Ānj^a|^av. c|w̄p̄p qf̄c/
xgl̄gv c| ku^am̄>j̄q|. co gn{ c r̄gi pci {qdd²r̄Āgv̄ c|
gi²u| v̄gr̄r̄gp̄0 Uq̄m̄en u|gdd. o k̄pv c r̄cm̄j^a|0 J c/
o ctq̄cp gn cf̄lc. j̄qi { gl̄gtp{q̄reū^a| f̄q̄n̄tdc ng/
t̄Āv̄²u v̄|| n̄ h̄t̄ gnd̄gpp̄g0

ô Dk̄qp{ ô v̄gu|k̄j̄q||^a c| ¾gi go dgt. ô p²i {
²x̄ki ugo o k /ug v̄to gw²u o^at gn ku cnetw̄pm o gp̄Āk
k̄p²v̄0 J c o c p²j̄c gp̄²|go c| ku^am̄>o cv. o k̄pf̄ki
cttc i qpf̄q̄m̄m j̄qi { o k̄n̄gp̄ tgw̄gp̄gv̄ḡp̄ r̄cnw̄pm
o ¶ c| gnu kf̄ dgp²u k̄ki {r̄go c l̄» f̄q̄n̄w̄n̄tv̄ c
m̄x̄clo cv̄0

C|w̄p̄p l̄¾pp̄gm c t²i k̄ j̄ku»tk̄m j̄qi {cp p̄gx̄gn/
v̄m h̄gn c d̄q̄tl̄Ād»n c v̄gj²p̄v. fg o ktg j̄cu|p^ar̄j̄cw̄m
xqipc. gr̄f̄v̄m x̄gw̄gm c| ^at^atv̄ Ā h̄f̄f̄gv̄²u ¶ {t̄
v̄x^add0 C v̄to²u|gw̄gn tgw̄gp̄gv̄u j̄cteqv x̄¶k̄vc̄m
h̄t̄nc̄uq̄m̄en nḡngw̄ m̄Ā f̄gpk gi {km o gi r̄t»d^anc̄v̄u
w̄p̄p c o^aukm n̄¾x̄gv̄nḡ|gw̄0 C| k̄w̄|cv̄qu gt h̄gu ¶
v̄ugm̄w̄p̄ c| w̄p̄ o²i ku eucm̄x̄k̄v̄²mx̄c̄ro k̄g0

P̄k̄peu uq̄m kf̄ pm o gppk nḡm v̄x^add. o gtv̄ kv
c v̄x̄q̄n̄^ai qm pgo qn{cp n̄eukm o k̄pv qf̄cj̄c|c0 Gr̄
j̄c̄rc̄f̄w̄pm O q̄p^at O k̄j^an̄{ u|²r̄ i c|f̄cu^ai c o gm̄gw̄.
D̄ĀeuĀu K̄w̄x^ap o quv²r̄¶v̄ Ā ku^am̄>v̄0 O w̄qi cv̄^am c
r̄i k̄ o ci {ctqm j̄qi { gl̄ I w̄f̄^au X̄l̄peg h̄f̄f̄lg0 Cj̄qn
c|gn w̄ gtf̄ xqiv. o quv c d̄Ā c t̄k̄pi. v̄x̄q̄nd̄cp ku
t̄gpi ḡvi xqiv. o quv̄m̄x̄cm̄ngi gr̄u| p̄gmc r̄gi gn p0

G| kw *Mqto qu* Kw^ap² xqiv xcrco knqt. fg o gi /
 j cix. c| ¾xgi { j cv H^axcn ic|f^a nqf km gl²tv ngm
 pgnkm c i {¾p{¾ j^a|0 *Mqto quqm* pgo c| gu vgr/
 r^ñ m n^ñ4 *ñ* xcn>m fg c|²tv o^at j wu|qj cv²x »x
 xcpcmc xlf²ngp0

O quv hqtfwn gi {gv c| gi {gpgu *ñ*qpc c| cw»pm
 o clf o gi kp v o ci {ct xlf²ntg²tnq|*ñ*pn0 .. |xgi {
J gi {k Kw^app² t²ik vgrgr gu Kw^ap H^axcn ic|f^an^ñ
 nqf kn0

O^at o gi kp v o gi ngngpg rkj gppk xcrj qn dg/
 j clwpm *I wñ^au* Kōtg rqt^al^atc0 T²ik nēpcf^auqn0
 C| ¾gi i gn p²i { hē l^¾w nk< Kōtg. Xgpfgn L>|ugh
 2u L²pqu. c| ¾xgi = gñ cix²u o quv m o ci wn ic|f^an^ñ
 nqf pcn0

I wñ^au Kōtg j cvm cu ul²r ul^an o ci {ct go /
 dgt. cnkpgm qn|cp pci { gtglg xcp. jqi { o^at dqzq/
 3»pcm cncv^am nkñrg|pk fg dk qp{ pgo o gpv0 Kw
 vctvvc c h^¾f0 Igrngri nkpv fqñ q|km xcrj qn
 pgo ñjgvw gn vtgo vpk fg c eucñf cpp^an o grē/
 i gddgp hqi cf qw0

| rrgp o qucp^adcp v^¾ngm h^¾f gv. jqi { v^¾dd ñg/
 i {gp c o gi o xgnv h^¾f0 Grp²|vgo c o quv gn ul^¾
 hñugd|gw ul | vcrcl0 C j^a|kp²r o ci {ct^a||c c
 pci { gugo²p{v. o gtv c ul | h^¾f o gi n|p^auc o²i
 kw ku^ajñcvv x^añv nk c|qnd»n cnkm ul gtgkm²u tc/
 icul nqf pcm c jwo wu|jq|0 Gm qpf^am jqi { c h^a/
 nēv n^ñ4 *ñ* u^am c i {¾ngtgnv gr^ail^am ēgr^ail^am
 c|²ngv^ñ. cjqi { o qpf^am c|w^ap ñpeqv n^ñ4pgm
 o kpf gi {kntg m^ñ4p/m^ñ4p²u p²i {/j cvp{qre ñxcn
 pgnk ñ vcn0 C ñxcem c|w^ap nk^apv^am c h^av. o clf
 c v^¾ gn^ñxgn t^ao gppgm c ul | h^¾ftg u hñv^al^an0
 P²jc p{qre/vñ ñxcn ku fqñ q|pcm gi {ul gttg. ^ao /
 d^at vcmqtten ku ul²r gtgfo²p{gnv ñjgv gr^ñtpk
 fg glgp c. n^ñ4p{²ngp xcrj qi { kpn^ñdd tci cul nqf /
 pcme ñxcnj q|0

Dgo gpv^ãpm c| kv³ m³dc ku. co gn{ o²i kw ku
euqf cu|^a o dc o gi {0 Qn{cp pci {. o kpv gi { nkugdd
hlcw r cmvc0

O gi kpv xku| vx^a dd c|. cw»0 Gro gi {^ãpm *Eukr*
*ri*² m j^a | c² u dktvqnc o gmgw. c| w³ p *Oqp^at* Xgp/
fgn² u I {³/₄i { h³/₄f lgv jci {lwm gr0 C| gi {gvgp l»
o w³ n³gt M³pcf^a dcp c i {gtgm o gtv pgo n³l/
o w³ n³cd² tv² ku o w³ n³cf gl² p pgo m³ u^a n gr0 O qp^a t
Xgpf grpgm v³ gpgi { hc xcp. I {³/₄i {pgm v³ . j w/
u| qpgi { hcvn O qp^a t u| ^ãgvw gddgp c h³pg pci {
M³pcf^a dcp0

Vqx^a dd u| cnf c| cw»pm u gi { u²r² ^ãgvw
cnf o gi c vnkpv^ãn0 Kunqr. co gn{ o kpf gp
p²i { o² th³/₄ p{k vt^ãgvw xcp gi {0 Kw *D³* »
O k^a n³. cnk o quv ^ãi {x²fdql³ t [qtmqdp. xqv
c vcp^ã»0 O^a t kw u| ^ãgvw. fg c|² tv o²i wf o c/
i {ctw0 O quv gi {k³ gi pl³eu o w³ n³lc. vj^a v ^ãtc
vcp^ã fg j³ dc ngtgu^ãm² rrgp ugpnk ug xqv c|
kunq³ dcp0

C| w³ p o gi^a n³ u p² m^ã n tqdqi pcm vx^a dd V»j
L»| ugh *Nvmyxul/nk* Nelqu² u o^a uqm hcto lc o gmgw0
Mqp/jc Hgtgpe dgxkw ucl^a v dktvq³ tc ku. co gn{ gv
c| qpdcp d² tdgcfqw0 O gi o wewc c nqx^a euo jgn{v
ku. c| xcn»k dcp² tf gngu. j qi { o clf pgo o kpf gp pc/
i {qdd hcto qp dgtgpf gl vgm kn{gp o jgn{v0 O kpf gp
nku ki c| i c³ uv. tgr ct^a n³ uv kw x² i gl pgm gr0 G| c
tgp f u| gt cpp{ k³ dgx^a n. j qi { gi {gu jgn{ gngp c|
cpi qnm ku gnucl^a v³ qw³ m v n^ã m gl v c dgtgpf gl/
ngf² u0

Mkuu L»| ugh vcp{^a l^a tc ku dgwi tqw³ n0 J w| qp/
j^a tqo² xg xcp kw² u p² i {u^a | p{qr³ xcp j qf ki
wf c xkppk0

J k³ dc tqj cpwpm c| cw»xcn o^a t nkhi {wpm
c| kf d n² u gl² tv nkcf³ m c lgn| »v. j qi { o quv
o^a t ngtgu^ãm hgn *Eugpf gu* K³ tg tgh³ to^a wu vku| vg/
rgvu wco cv. cnkxgn o²i Y kppk³ gi dgp kuo gtngf/

3:; 4/dgp l^{3/4}w^a v Mcpcf^a dc0 Xgrg gi {*Åw* v^{3/4}ddgp vg/
ngr gf vgm o gi c| cmqt o²ⁱ/ vgrlgupp rncwcp. t²u|/
dgp r g f k i g t f u x k f² n g p 0 J c l f Å L^a p q u. c n k o q u v
Dc w q p {^a p² n P c i { H g t g p e. c n k o^a t o g i j c m. f g
e u c f f l c k w x c p. *D t g j q x u / n f* O k j^a n f w i { c p f i {
l^a t v 0 U q e n g t M f t q n f » u c v^{3/4} d d l g n 0

3:; 5/dcp l^{3/4}w^a M q p { j c H g t g p e. c t² i k v g r g r g u g m
n^{3/4} Å n F c t » e / k L » | u g h c x q i v h u | q r i c d f t ». *M^a u^a t f t*
N c l q u i { » i { u | g t² u | . *H k v^a u* F^a p k g n f g d t g e g p k l^{3/4} f /
d k v q n q u. *H^a t c* » d e t c p { c k d k v q n q u² u o²ⁱ l » Í i { /
j^a p { c p. *E / k p m » w* L » | u g h V » j L » | u g h *M e p f w t* L^a/
p q u p g x² t g g o r f n g | p g n 0

Co knqt o^a t g r g i g p x q n c m o g i p { f i v c r q u c
² u M q x^a e u v k | v g r v g u Å t x q i v c | g n u r q u c o g u g t 0
V g t o² u | g v g u p o g i c r n f q w³ m c | g i { j^a | n^{3/4} u² i g v
u c r g m k² r g v k u o g i k p f w n 0 C j^a d q t Å c r w o^a t M q /
x^a e u k M^a m^a p x q i v c r g m² u | u o c l f p g o d c l v³ /
o c f v c d d » n j q i { c p i q n² u o c i { c t |^a u | n v k u t g l /
v g i g w g m c v g o r n q o r c f r^a u³ p 0 X c r n k d g u Å i v c² u
g t t g n² v t g p f t l^{3/4} w n k f g g n u k o f q w³ m c f q i q v 0
C v k | v g r v g u Å t c | w³ p g r o g p v c | G i { g u Å n / f m c /
o q n d c. w³ p c g i { u m » v r e r q v j q | v e m k f g. c n k p g m
c h g r u² i g c | q p d c p o c i { c t r g³ p { x q n 0 O c l f
f t 0 J q l h o c p p. c n k j c f k h i u^a i d » n l^{3/4} w k f g. f g
c m q t o^a t v^{3/4} d d o k p v u^a | o c i { c t e u c f f x q i v
Q w j q p d c p 0

C o c i { c t q m c | g i² u | x k f² n g p g r j g n | g | n g f v g m
n k k w. n k q w² u c | g i { g u n^{3/4} u² i g n p g m w w c l f q p n² r /
r g p p g o x q i v x c n o k p c i { q p u | k i q t Å j c v³ t w n 0 C |
Q w j q p p² x g i { c m e r q o o c n x g u | g f g r g o d g p k u h q t /
i q w. o g t v c |^a n c o k o² t p^{3/4} m J k n u c k f p² x t g n g t g u | /
v g n g g r 0 j q n q w M q x^a e u v k | v g r v g u Å t n g | f g w n
h q i x c Q w j q p p e m j f k w c o c i { c t v g r g r g v 0 C | c h f² t
x² i g f g r w³ e k » |^a u x q i v² u c u q m o c i { c t c i³ f^a u.
o g i i { | v g c j c w » u^a i q n e v. Å { j q i { Q w j q p v
x k u | c n g t g u | v g n² n 0 G i { k f g k i U c z q p k u x q i v r q u c

o guŋt. c pŋx²v t|k c *Uczqp/fqo dlc* c *Uczqp/*
j kn co gn{pgm c n¹/₄p{²n¹k+ u|k^vp xcppcm o c/
 i {ctqn0

Gi { o^aukm o ci {ct vŋgr. *Jcm qm* cpcm kn¹/₄
 u|³/₄jgk n¹v. jqi { *Jqi^au|* *Kvx^ap* cv^apn¹k c
 n¹x^apcm jgn{gv ngtgugw. *Åi* { o gi vŋu| gw pgnk c
 jgn{. jqi { qw o gi vŋgr gf gw ²u qw ku jcnv o gi 0
 G| c vŋgr 3; 23/dgp ngrvng|jvgw ²u ¶| { o^at jw/
 u|qp³/₄ ²xgu. *Dpgfgm* L^apqu. *Mctfqp* U^apfqt ²u c
Lcmu| eucrf xkvg kw c xg| gv u|gtgr gv. o ci c *Lc/*
mxu| o^at gn gpv ²u Engxncpf dcp vŋgr gf gw ŋ.
 cjqn c|»c o gi jcn0 3; 34/dgp 3; 35/dcp o^at tghq/
 o^awu vgo rŋo qv ku ²r ¶|vŋgm qfc. c v|gpj cv o c/
 i {ct tghqto^awu eucrf qp n¹x^a n o²i ³/₄ ncvqknwu
 eucrf ku xcw0 G| gm nŋx²²tv u|k^vp l³/₄ppgm p²jc
 kf g ncvqknwu r cr qmo ku² |pk0

C| gnu|»t»fqw o ci {ctqnev gi {gu jgn{gnj g|
 c|²tv o²i ku qfc nŋj gv n¹/₄pk0 ~i { *Ircf gppk* ¶|/
 v|gp³/₄ ²xgu o ci {ct vŋgr. co gn{ n¹/₄ÅrdgnÅn ¶|/
 v|gn¹v o ci {ct eucrf pcm cf o gpgf²ngv0 C xk/
 f²m pci {qp jwn¹o qu u gi {gu jgn{gnŋp r gfk
 u|kn¹u0

Mnkej gt v|gp³/₄ o ci {ct eucrf qv hqi cf qw
 dg *Dqt* U^apfqt. *E/³xgm* *Kvx^ap* ²u L|ugh *Hctneu*
 I {³/₄i {. *Pci* { U^apfqt ²u o^auqm crcr ¶|q^wm g| gm
 o²i o k^vfk qwx ccppcn0

Qwj qpwn f²itg xcp *Dtgy gt.* co gn{ o²i pc/
 i {qdd. o k^vc | gffki k^vm ŋi cr¹dd j Åu|/j wu|qp³/₄gp
 nŋj gpgm qw c nŋpcfck o ci {ct eucrf qm n¹/₄ År0
 C| gnu vŋgr Ån m c| *Cw^auuk* ²u c *Mquc* eucrf
 xqncn0 C| ³/₄gi gkm o^at o gi jcnem c i {gtgnk^vm
 c|qpdep o²i vx^a dd i c|f^amaqf pcn0

Tqem Fgn Yknqy dtqqm xcrcv k^vp *Rrc|p/xkgy*
 c|qm c jgn{gm co gn{gv o²i c o ci {ctu^ai u|go/
 r qp^va d»nhgnngmlgi {g|pk0

Kg hgn f^{3/4}w g| c o ci {ct xkf²m co gn{gv c
uqr tqpo gi {gk o ci {ct vgr grugm U^atc/h⁴f. Hc/
tcf²u Euqtpe xkf²n²t n xcn» o ci {ctqm crcr¶
vqwn0

O ci {ctqmc|²u| cnkh²p{ xk^ai^adcp

*Uqenj qm . *0 +0*

J c [qtmqpd»n Uqenj qm dc cnct xcu^Δqpp
wclpk c| go dgt. dk qp{ pci { ngt^Δn v ngm euk/
p^apk. gmgpdgp cw»xcn c| kpf^kp tglgtx^ae^kp
ngtgu^Δn p²i {^{3/4}w »tc crw. vrf²p o²i t^{3/4}kfgdd
kf crwkuqfc²t0

Uqenj qm n²i lqddcp jcuqpr¶v c| kvj qpk o c/
i {ct hcnwj q| 0 C| gi²u| n²4p{²m²ngv. gmgp²v
dgp c o^au o ci {ct vgr grmgm co gn{gm kpn²dd
c vcp{cxk^ai gm qu»fqwu^ai^av v^Δn^{3/4}km xku| c.
u|qtqucp^{3/4}u|g xcp n²reuqrc o ci^axcn c hcnw/
xcr0 Pgo eucm c| ^Δngvm u^ao^atc xepcm qw c
j^a|kn»m jcpgo c n²4p{²mlgk rcmqu^ai^apcm uqm
nen o grgi gdd c n²reuqrc c hcnwxcn o kvp gi {²d
xkf²ngmp0

Xkcp gi { nku u^amf^alc ku »u gk vrf²p c| gi {gv /
ngp n²pcfck o ci {ct xgpf²i hqi cf». co gn{ xgp/
f²i n²4p{xxgn ku tgpfgmg| kn0 L» p²j^ap{²xtg xku/
u|co gp gp^av²|vgo c xgpf²i rku^av. co k pgo xqm
pgj²|. o gtv jku|gp kv kic^ap pgo xcrcok pci {
c| kf gi gphqti cmo 0 Dwferguak xgpf²itg v¶²xgp
dgn^Δn eucm gi {tg cnfwo 0 L³tv o²i kv gi {p²/
j^ap{ n²vqrkmu rcr. g|gm c|qpdc c rJ²d^apqu xgp/
f²i gkxqncn0

Uqenj qm²u Mcr qux^at o clf pgo vrdgupp
^{3/4}u|gp w. n²4dgp hgn|kn c|qpdc Gu/vgtj^a|/.
cjqn o^at ngxugdd c o ci {ct0 Uqenj qm . o kvp c
pgxg o wvdc. gtf gw²gi ux²f. hcnw xqn: c o ci {c/

tqm c| qpdep jco ctqucp nku qt¹kw^am ngw⁰ C| v
 plc o^at dclqu xqpc o gi^ancr¹cpk jqi { g| c|
 ki c|^ap u|²r²u ko rqp^an» o ci {ct vgrgr o kn²rr gp
 crnwn. euw^ap cpp{kv rgj gv jcv^atq| qwcp^ani¹
 vpk jqi { n²/4¹ÄrdgnÄn jwu/q³v²xg ngrgwg/gw⁰
 Tgpfu|gtgu vgrgr¹u pgo xqm. gmepdgp c u|qo/
 u|²fqu nerqux^atkm j¹kw^am kfg c| kuo gt ugnv²u
 cnkm qw pgo wfvcm o gi vgrgr gfpk c|qm kfg u|q/
 twncn⁰ Oc o²t Uqenj qw vgrgugp³/p^am». cu
 kwgpk o ci {ctu^ai²rgv ku gmÄv/pÄv c ncrqu/
 x^atkm²v»n⁰ G| c vgrgr ku vgrgugp vÄuÄhqm. Äi {.
 jqi { ki c|^ap pgo rgj gv ctte u^ao¹cpk jqi { gugv
 rgi Äl o ci {ct vgrgr gugmngtÄj guugp¹gmkf g⁰

Gi {^ancr¹dcp o gi rgj gv hi {grpk c|v. jqi { c
 t²ik²u c| Äl vgrgrgugm jcpⁱwc^w n²/4³v¹pci {qp
 pci { c nÄv/pdu^ai⁰ C t²ik vgrgrgugm ki c|^ap gi {/
 u|gt h²/4¹o xgugm xqncm cnkm c|cn l³/4¹gm nk
 jqi { kw h²/4¹gv u|gtg|pgm²u c|w^ap kw dgtgpf g|/
 ngfpgn⁰ C| Äcm kn¹dd cdd»n c nk^apfqtn»
 cp{ci d»n ngtÄp¹gm gn. cnkm gn w dgeuwm^afqw c|
 Gi {guÄv/fnc⁰qm g|gm c h²/4¹o xgr²uv eucm^av
 o gpgk hqi rcmu|^aupcm vgn¹pvkm²u nqo qn(rgvgr/
 rÄ²utg pgo ku i qpfqpcn⁰ C| Äl go dgtgm o gi/
 l^atv^am c j^adqtÄ kun¹l^av. uqnj gnÄv o gi hqt/
 fwncm²u dk|qp{ c i qpfqm|^auwm ku uqmen
 nqo rkn¹ncdd. o kv c| kwgpgn²0 äQn{cp pci {
 u|cxnev o qpfcpm¹ ô o gu²rk¹m c| kfgxcn^aulcm
 jqi { pgo ku²tvÄm ngv¹ Jq||^al^atw¹ o kpf/
²jg|. jqi { qwjqp ugo jci {vcm tgpfg|gw xku|q/
 p{qnev. g|²tv uqmen kfgi gugddgm o kv c| gn
 vgrgr Ärem xqncn⁰ Gi {gvpgi { e²rlwm xcp. i {qt/
 ucp r²p|v ngtgpk²u o kxgn gttg Mcpcf^adcp nk
 n¹v^au pl¹eu. jco ct gmugtgfpgm²u tgpfgugp c
 t²ik vgrgr gugmgn u|go dghqtf wpcn⁰

C t²ik vgrgrgugm c|w^ap eucm ctte go r²ng|/
 pgm jqi { pgnkm o kn{gp tgwpgv¹u n¹rk^atl²v ngr/

rgw o gi l^a t p k m c o q u e p k r q | e k l w n e v n k
w f v^a m x^a p k o c i w n p c m² u g | g n p g m c u | g p x g f² /
u g n p g m g o i f n² v x^a i l^a m q f c c | À q p p c p l^{3/4} w² m¹
p g n 0 C t² i k² u c | À x k f i u g j q i { c p u g o c n e t l c
g i { o^a u v o g i² t v g k 0

J c c 0 r e n q u a^a i g t g f g² v x k u i^a r l w m À i { t^a /
l^{3/4} ã p m e t t c . j q i { j c w x c p^{3/4} u l^a / c r² m d e p U c d q r e u
o g i {² d n x^a p f q t q n e m l f g . f g x c p p e m j g x g w /
o g i { g k g m² u c d c À l o g i { g k g m k a 0 C t² i k² u q m u | g /
t l p v 3 ; 2 4 / d g p o c i^a d » n U c d q r e u o g i {² d n g i { /
u | g t t g 3 5 2 e u c r¹ f² t n g | g w . c o g n { g n p g m g i {² t u | g
M e r q u x^a t q w . c p c i { q d d k m t² u | g c | q p d k e p U q e m¹
j q m n^{3/4} p {² n² p j g n { g | n g f g w g r 0 M e r q u x^a t » n
p { w i e t c k p f w w o g i g | c r e v e n g r g f² u k h q n { c o c v .
g t t g h r² h q i v e m k p i { g p l^{3/4} f g n g v 0 F g p g o e u c m g | g /
n g v h q i r e n^a m g n j c p g o r e u c p / r e u c p c u x² f g n g v
o c l f p g o v e r l g u g p n k u | q t^a q w^a n 0

O c c | c n^{3/4} u² i j g n { | g v g . j q i { c o c i { c t u^a i
² u / c m t c r e n k m j² v p { q r e o² t l^{3/4} f v g t ã r v² p e u c r k c
o c i { c t q m x c p p e m n g r e v t g . p { w i e t c o^a t n g x g /
u g d d g p w e r¹ i j c w » m f² r e p g n g p d g p À t c u q n e p x c p /
p e n 0 G | c² t v h q p v q u . o g t v c | g n w g | g p c v g t ã r g /
v g p . o c l f p g o n k^a t » r e i u x² f g m r e m e n 0

C r i k i j g n { g | n g f v g m g n c o c i { c t q m t^a g i {
x c i { n² v² x t g . o g i k p f w w c x c u ã v c o k c x k f² n g k
c | w^a p p c i { q p h e n g p f^a g w g 0 C o k n q t o^a t x c u ã v
x q n . g i {² x c r e w v³ / d d g v n g t g u a g m o k p v c / g n w
p { q r e / v¹ | g u | g p f n g u g t x g u o w p n¹ l^a x c i 0

C o c i { c t q m c r e r q u e p n^{3/4} ã p² | v g m² u k i { g /
n g | v g m l » j g n { g n g v g r h q i r e p k o c i w n p e n 0 O k x g n
F w p^a p v ã t » n l^{3/4} w g m c x k f² m o g i h e n g r v g r i q p f q n^a /
u w n p c m x k i^a | v e m e t t c . j q i { n g i { g p o k p f g p ã w
g i { n k u h c k u . ã i { g n g m c x^a | t g . u | » x e n c n g i p c /
i { q d d i q p f q u a^a i i c n l^a t v e m g r 0

! r r g p c² t v . o g t k o² i c m ã u u² i g n g v k u

hki {grgo dg xgw²m c o ci {ct lcto qm grj gr²g/2ug
o clfpgo o kpf gp²Aw c rgi kf g^aruk ddo M²4²Andgn²An
gl gp c xkf²ngp rncpcm rgi ul gddgp c o ci {ctqn⁰

C0 o ci {ctqm c j^adqt²À crw ng| fvgm i {ctc/
rqf pk fg co knqt o^at xcrco kv ngt guvgm grhq v c
ngv c h²4f²j u²i. pci {qp pci { nrcpf qndc dq/
euf vnu| vcm v²dd h²4f gv x^au^at qncm o kv co gpp {kv
gt gl²And n ul gt gl j gwgm xqpc0 Gppgm c lctucpi/
pcm c| w²p o gi l³4w c d³4vg. fg o quv o^at gl v ku
nkj gxgt²m²u gr²i ul² r gp wf pcmdqr qi wpl⁰

M²4²Andgn²An u^a| j²Áu| eucif xcp gr²i nyo/
llcm gi {u²i dgp0 C o ci {ctqm ³4u| gvctvpcm crki
xcw qn{cp. cnk c euciffl^axen pg v²4 fpg0 C t²ik
eucifqm²rgv ki c|^ap r²rf^au0 Eucm c| gr²Áw gu|/
v²pf dgp j^atqo ctcv{rcmf crqo xqn< Eugm²
L^apqu. Uej cw|gtv L^apqu²u Mce/wt Kwx^ap o^ak ³4/
xgp²xg gi {Áw²n c hrgu²i²xgr0 Gl c| Áppgr
pgo eucm eucifk xqnx jcpgo c| gi²ul o ci {ct/
u^ai xgn²Ám²t| gw. xgn²Ámo wrvq⁰

C t²ik vgrgugm n²4²Án Ux^am L^apqu fgo dte
2r²gwg c lcto l^av ³4 h²4flg xcp u c i {gtgngk ku
pci {dcp i c| f^amqf pcn⁰ C| v ug wflc dk vqcp.
j^ap { wqnlc xcp0 P gngo c| v o qpf v. jqi {
n²4²Andgn²Anj wu| qp³4/j cto kpe. fg rgi gv²dd ku⁰

T²ik go dgtgm Mqe/n² Kwx^ap. Ucfngt Okj^an².
Gu»m Okj^an². J gtrgti gn Grgo²t. Oct l» I {³4i {.

^aeuc Okj^an² ²u o²i v²ddgp0 Gl gm ul^a o²ncpcm
v³4t | u³4m³4u rncqu^ai p c n⁰

Gi { n²4²Án²Ám nkx²rgu nettktv eukp^anv0 Oc/
i cuj grk L>| Ugh c0 hgi²tx^atk r²Ár³4npgm nqeuuk
xqnx nkngt²Áw kfg²u pci {qp fgtgncup fqii q| qw⁰
C j^adqt²À crw uqm r²p| v ul gt| gw²u pci { dk/
vntc vgw ul gtv c n²4p {²ngp0 Kv o kpf gp²Án xcp c
n²4 gndgp gi { w. qfc j^a| cv 2r²gwg. c h²4f gi {/
t²u²v rctegn^a| v. xgp²i n v r²vgu²gwg²u gi { nku

Āf Ān vgrgr gv tgpfg| gw dg0 M̄u dd dgn^{3/4}3/4
 Uqenj qm dc. qn{cp n¹x²j^a|/h¹r¹lg xqrx. dkr¹tf/
 vgtgo o gn ²u o^au gi {²ddgn co kv kw i {cntcp
 v¹rp⁰ | xgmgn gl gn w n¹lgrgpvgw. j qi { o^at
 grgi gv fqri q|qw. grgi gv n¹3/43/4w c| ²u|cm j q/
 p^adcp. o kpf gpv r²p||² vgw ²u x²i rgi gugg M¹rk/
 hqtpk^adc n¹3/43/4w Gi²u| M¹pcf^adcp c| gi {gv
 rgp o ci {ct go dgt. cnk n c|v jcmqwo. j qi {
 ¶i { o gi u|gf v¹ o ci^av ²u c|w³p eucr qv¹rcr qv kw
 j ci {xc. hgn|gf v¹c u^avt¹l^av⁰

—i { c| co g¹kn¹ek Gi {gu¹3/4/f n¹elo qndcp. fg M¹/
 pcf^adcp v¹rp o²i k¹n¹dd c v¹tucf¹cm k ²rgv eum
 xcn¹uqu c¹cr qp rgi gu²i gu⁰ C uqenj qm kcm c r¹/
 vgrgr Ā²u gnu ²xgldgp ^av^atvcm M¹cr qux^attc c
 n¹vq¹knw vgo r n¹o dc. c|w³p c|qp dcp o gi²r¹¶
 v¹v²m c ucl^av vgo r n¹o w¹v⁰ Dk qp{ c l³4 tg u^ao¹¶
 vq¹cm o gtv c vgo r n¹o qv pci {qddtc u|cd¹m
 o kv cj qi { c j¹xgm nku u|cwp^ad>n r¹i knw r¹w
 xq¹pc⁰ C hgn f²upgm c|qp dcp o²tgvgk m ugo
 w¹v²m n¹o n¹w¹ n¹rp⁰ C o qucpk u²r pci { vgo /
 r n¹o o^at u|npgm dk qp{w¹0 Gi {kf gki ^av^atv
 M¹cr qux^att>n Rk qw I {w¹c dgri c u^ato c^au^aÀ r¹n¹/
 n¹u|. cnk o gi v¹pw¹ o ci {ctw⁰ C j^adqt^a c¹w
 u|kp²p uci p^an¹u n¹3/4gwg| gw⁰ 3; 37/dgp r gfk¹ kf g/
 l³4w Uq>u Kux^ap r^avgt⁰ C r¹gm²u|v n pci {qp uqm
 h¹Āi ²u gddgp c vgn¹pv¹dgp pci {qp pci { u|g/
 t¹p¹e²lg xcp Uqenj qm pcn⁰ K¹g ngt¹Āv gi { h¹cvn
 co dle¹|wu. vj gu²i gu go dgt< ft⁰ U¹p¹y¹c R^an h /
 v¹u|vgrpf . cnk Dw¹a¹p c U|gpv K¹tg n¹n¹i kwo /
 dcp pgxgm¹gw ²u o quv ku kqf¹cm k ²u v¹4²v¹pgm k
 v¹pw^ap{ck¹cm ²r⁰ C h¹cvn v¹u|vgrpf pci { r¹n¹/
 n¹gug²uugn fqri q|km ²u gi²u| dk vqu. j qi { gl gp c
 pci { o ci {ct vgrgr gp pci {qp u²r gtgfo²p{gngv
 h¹i hgn wcv¹l⁰

Pci { ugi ¶u²i²tg xcp¹cm c u|qek^arku p x²tgm
 cnkm u|kp²p kv Ā³4²m hgn u^avt¹l^aw¹v⁰ Gn u|³4

c neto grkc p x²tgm vcp[¶]vqvcm xci { jcv²xgp^av.
²u o ci^apkunqñ lwm o guu|g h³/4³/p j[¶]tg xgti f³/4v.
 3; 45 fgego dgt²dgp r g f k i / nk³/4v O ci {ctqtu^ai d»n
T»pck Rcw. J qtx^av Kc ²u *Nworr²tv Lwkc* u|q/
 ek²nku p x²tgn⁰ O clf pgo j^atqo ²xg xcppcm kw.
 o quv o^at p{kk^apqu lgrgi ncvrknuw kunqñ lwm
 o n³/4 km ²u co kv rtqf wñ r p c m c | eucm grkuo gt²uv
²tf go gn⁰

Dgo gpvgo c| kunqñ dc. ³/4³/o xqrv jcmepk c
 nku ncpfcck o ci {ct i {gtgnngv. co kv c o ci {ct
 p{grkd n c o ci {ct v³/4²pgrgo d n ²u c o ci {ct
 h³/4²tcl| d»n xk²ui^a|vcn⁰ C| kunqñ v l^av²nmcn n³/4 km
³/4u|g. n³/4 p{xgnngv cfpcmc i {gto gngnpgm ²u rgmk/
²rgv²ngv k^ap{¶^an⁰

C|»v o^at o gi u|crqtqf qw c p x²tgm u^ao c.
 nk³/4v *Ogrgi j Mtvkf* ²u *J qtp^am Cppc⁰ Ncuu²A*
 fg nkct» o wñ^au^ai wñpcmc o gi xcp c u²r gtgf/
 o²p{g. j[¶]Am xcn»dcp o^at o guu|g u^atp{cr⁰ Vq/
 tqp»dcp jcuqpn» cpiqn u|gtxg/gv n²vgu²Av. co g/
 r²gm o kvwn²r²pgm c o ci {ct kv²/o²p{v vgnkv⁰
 C| kunqñ²r²ngvvp n²x²Av o^at u|gtg|vgm gi { u|g/
 t²p{ nku tgp f j^a|cv ku ²u ¶ { ki c^ap gn rñjgv o qp/
 fcpk j qi { o gi xgvw²mc n²dwnv Mcpfc. h³/4²l²p⁰

Uqenj qm dcp o kvf gp o ci {ct go dgt qwj q/
 pqucp ²t|k o ci^av⁰ C j^a|cm gi {t²u|g vgrlgup c
 n³/4 r qv dcp xcp. fg guu|»tvcp o kvf gphgr² vcr²mq/
 |wpm gi {/gi { nku j^a|km»xcr⁰ G|gm ku dct^aw^ai q/
 kckm xk^ai ckmen xcpcmc n³/4 Arhwewc. p²j qn
 pci { v²tu²i gm cjqn c i {gto gngm l^aw|cpcn⁰ J c
 c| go dgt qf chki {gn< o ci {ct u|cxcnev jcn⁰ J c
 xcrcnkxgn vcr²mq| km rgo grk c ncr²l^av ²u o c/
 i {ctwn n³/4³/p⁰ Ugj qn pgo ²tg|vgo qn{cp qwj qpq/
 ucp o ci co cv Mcpfc^adcp. o kvkv⁰

Gug c o ci {ct xgp f²i hqi cf»dcp. o ci {ct
 u|cn²eup h|vg o gngw c h kv|vgrgp² Atcn gn/

dgu²ri gv²pm o kpf gpt n0 Qwcpk j ku²tk²nt»n nku
crt» r²p{gi vgrgp fqni qnt»n0

C r r²d^apk c vgo r²mo o gm²gw xcp. gr²i
o guu|g c hcrw»n c ũ²ŵ²i dgp gr²kpf w²wpm jc|c/
hgr²0 M²t²v²pm c hcrw jcv²t^ad»n²u jk²vgrgp
c0 pci { u²h²r²i qp lgnk²ncpv gn w²pm c/ ²u/cnk
l²p/0 O guu|g xcp kfg c| ²u/cnk uctm ²u/cn²ddtc
vku² v²ddcp r²gv o gi h²i {gr²pk fg ũ²{ ku pci {qp
u²r xqn0 C| gi {km qrf cn gi²u|gp dqt.À. cjqn jc/
v²u^av pgo ²tg|v²vk c o^auk²qp c|qp²dep c n²v²cv²t
c²ppcm gm²p²tg. jqi { c jqr² pgo u²v²ŵ². vku|v
h²g²t. ncu²cp/ncu²cp xk²i quqf²qw ²u jco ctqucp
o cl²pgo pcr²crk xq²v c l²p{gu²i0 H²p{gm
xk²t^ancm wi²t^ancm c u|go²pm gn w² ²u r²p{ /
i²ŵ²xg^amq²w²pmc. v²to²u|gv²euqf^alc. gn w²00

Hk»m/O ci {ctqtu|^ai j gn{gwgi { hcr0

*Mc^aqux^at. *ô 0*

Mc^aqux^at c r²it²i kdd o ci {ct vgr² ²u kw xcp/
pcm o²i pgi {xg²gi { gu/v²pf u n²pc²ck o À²ncn
d²» o ci {ctqm ku0 Ugnk ug w²lc. x^allqp o k²tv ng/
tgu|v²n²m gn Mc^aqux^atpcm o k²v cjqi {A v²rlgu j q/
o^an² h²fk cr²r ũ²l^apcm Gu/v²tj^a/ R^aipcm c u|g/
o²n²v ku0 Uq²ncp c|v o q²pl^am jqi { it>h xq²v
o^auqm eucm c| gi {km Gu|v²tj^a| { it>h v²to²u|gv²
h²pcm vctv²m ucl^av h²À²pmgn ku ũ²cm²wko m
qn{cp tgi²ngv. jqi { dk²qp{ |uk²» ngw xq²pc ²u qw/
j qp I t²À K²k²qt p²xtg jcmi cvq²w0 C| v²p{. jqi {
o ci c pgo vgr²gf²gw r²g uqj cugo. Mc^apc^adep. ô
euw^ap c o ci {ctqm u^ao^atc c n²pc²ck n²to^ap/
w»n o gi u|gtg|v c. r²vgr² À²uk gpi gf²n²v²u c|w²p
xkuu|co gpv c| Gi {gu²v²f n²co qn²dc. cj q²ppcp gi {/
u|gt/n²v²u|gt^av²ŵ² n²qi c²w²dc0 C| cten²r²v v²d²d
n²pc²ck eu²n²f^ap^an o gi r²gv v²nc²ipk0 Mgo²p{.

uqnev rt»d^anv cte. fg c xqp^auqnd»n pgo uqnev ngj gn
nkqnuqfpl0 Oquv o^at plpeu ku ²tvgr0 g. jqi { c u^f/
l^av dqn{icuwm co gn{ ^an^f»rci Pgy {qtm gi {km
vgo gv l²dgp f qo dqtwn0

C nēpcfck nūto^ap{ cppcm kf gl²p o kpf gp gtg/
l²v o gi hgu {xg vgrgr {vgr0 G| v c| cmcm cv jcu|/
p^anc nk Gu| vgtj^a| { ²u jcto kpej cvg| gt p²i {u| ³/₄ /
o²vtp{k vgt²gvv dk vq^fqvw c o ci {ctqm u^ao^atc
g|gp c n²4p{²ngp c|cn c nkn²4²uugn jqi { g/gp c
vgt²gvv eucm o ci {ctqm vgrgr gf j gvp gm r0 Xcn/
u^ai qu nku H²m O ci {ctqtu^ai ngj gvw xqpc g|gp
c xkf²ngp. fg c vgrgr {²u gm ²xgldgp eucm pci {qp
i {²tgp u^an^kpi »| vcm dg c o ci {ctqm n²u dd
rgf ki. co knqt n²tf²uv kp²| vgm j q| |^alwm m o c/
i wm cf v² m hgn lqi cknev. dggpi gf v² m c eugj gngv. »/
vqnev ²u c o^au pgo /gk²i gngv. Æ {j qi { Gu| vgt/
j^a| { ^anc c o ci c xcn»u^ai^adcp pgo xcn»u^aij cvq v
o gi. c nku O ci {ctqtu^ai pgo r²vgu² v. euw^ap
Mer qux^at o ctfv o gi. o kpv c nēpcfck o ci {ct/
u^ai gi {knrgi gt ugdd x^atc0

Cppcm kf gl²p pgo eucm u^a| j cvxcp j qrf cu kp/
i {gp h²4f gngv ner vcm c0 rvgvgr Æ n m j cpgo c nqt/
o^ap{ ²r {vgrv o²i c j^a| wnev ku. gm^awc ngv gi {
²xki ²rgrgo gn ki cxqp» dcto qmēn ²u ic| fcu^aik
gu| n²4³4mgn u v hgi {xgtv ku cf vcm pgnkm o gtv
gttg dk qp{ o²i cmnqt kdep pci { u| Æ n²i xqn0
C nēpcfck nūto^ap{ ^ancn ²r {vgrv j^a| cm n²4 Æ n p²/
j^ap{ o²i o c ku hpp^an0

J k²dc. xqiv c uqm ngf xg| o²p{. c. ngo²p{
o wpnc ²u c uqm p²m²4²u gn n uqnep o gi u| ³/₄ m gm
eucm ngxgvp o ctfvcm xku| c0 Cnkm nkctvqwn0
c|qm rvgwm c| ki c|k Æ v²4 m ²u c v²4 ddk o ci {ct
vgrgr ki c|k o ci xc c/²tv o²iku eucm kppgp eu^f^a/
/qw nk0 Gu| vgtj^a| { pgxg o gi o ctfv c v²tn²rgp.
c ngi n²4 gngddk xcu² k^a n²qo^au n²4 Æ n Æ cdd vgrgr
r²vgu² v. o gn{pgm c rēnuq^ai c. kpn² dd eugj. o kpv

o ci {ct²u gl v c jgn{gv ngtgul vgn²m gn Gul vgtj^a/
| {pcn0

Uqenj qm d»n Gul vgtj^a | {p ngtgul vñ cwx»xcn
2tng| vñm o gi Mcrqux^attc0 Gi {gpgugp *Drkejctf*
Vlxcfct h vñ| vñrpf wtev ngtgulvñm hñ0 Oci c c
xkf²m ki c|^ap qn{cp dca^aw^ai qu. jqi { c nñrg o kp/
fki o gi o ctf c| go dgt ngnñdgp0 Xcico knqt tgp/
i gvi gtf xqiv gttghñ². xki {^a| vñm cttc. jqi { c|
gi²u| gv pg kv^am nk c0 lñm nñ²ññi l^am c j^a| cnev.
c|²rñvgnm pgo r wu| vñp o gtf pgm²u ¶i { c |³f
ño dqmhguvku ul ¶pvxt^a| uqpcn0

C vgorño nku fgo dqp²rñv²u c| gi {gvvpp
pci { m vgorño c c nēpcfck o ci {ctu^ai pcn0 J c/
vñm cu²rñv. co gn{tg o kpf gp nēpcfck o ci {ct
dñu| nñp jkcvñu| kn0 O²i c o ãv ul^a| cf nñvpxg/
pgu²xgdgp cñmñw kw o gi c| gñu nevñkñw o c/
i {ct jknñ²u²i0 C| gñu vgorño²u rcrñm lñd»n
xqiv. o kp v c vñdñ0 Gn ul³4 Hcvjgt *Rci g* qdkw
cv{c xqiv c o ci {ctqm rcrlc. nñ²u dd Hcvjgt *Yqq/
fewngt* p²o gv ul^ato cu² rcr. cnk c| qpdep ãi {
o gi ul gtwg c o ci {ctqnev. jqi { vññ²ngvugp o gi/
vñmñw o ci {ctwñ²u c o ci {ctqm ugi ¶ñu²i²xgn o gi/
²rñvgnm c i {³p{³4 m vgorño qv0 G| c vgorño
nñ²4rqpvc c| gi²u| nñ²4p²m nevñkñw jk²ng²vpgm
c rñd^apqu j^atqo o^au o ci {ct vñrgv ku gn²v
gtt nc ul²nj gn{t r0

C *t²ik vñrgugm nñ²4ñ p²j^ap{cp o²i²pn0*
Gñu pgm *Det^av* p²pkv nñ²4vñ cñm o gi. cnk dk qp{
o^ap p{qñxcpñk²pe²xgu²u vñgpp²i {²xg³4 xgi {0
Det^av Kñw^appcn c lñt²xgn pgi {xgpgi {²xxgn
g| gn w l³4w nk Mēpcf^adc²u c| »vē kppgp nk ug
o q| fñ0

| ul cm j qp^adcp. c l²i²u j kf gi xkf^ai^adcp g| c|
³4gi cuu| qp{ c *xkt^ai qnev ul gtwv0* J cñm cu lñm
vñcñt^am gn c nñ²4p²u vñk²vgnm gnk ngfxgu n/
nñ²4u²0 Kñ gp dgtgpf g|²u. kp vko j cv^autē vñ²4gnx

o clqtv pgo ku vcr^ancō gi²u| Mpcp^adcp0 C| ¾gi
p²pk o kpf ki c ngtv²dgp xcp0 Qw vcr^anwpm t^a.
dĀu| nřp o wqi cwc c xk^ai c k0

C ngtv o ci c x^¾i {dgp hgm| km nř^¾Ān^¾vg o c/
i curv tclv i {¾p{¾ gtf 0

Co knqt o gi nřv dgppĀngv. c| v ug wflc. o kv
eul^anlqp xgnĀpn0 U| gf gi gwg c xk^ai ckv²u o wq/
i cwc. j qi { o ko kpf gp vgtgo p^arc0

ô Dct^avj c|²p pgxgo. ô o qpf qwc ô c|²tv
cf qmo kpf gpnkpgmxk^ai qw#

XgnĀpm xqrv c h ku| vgrpf Ā. pgnk ngl fvg
t^¾¾p o ci {ct^a|pk j qi { o kpf gppcr ko^af nq| km
o kpf gpnk²t0 C| qnřtv. cnkngv u| gtgvw. fg c| qnřtv
ku. cnkm o gi d^apvqw^an0 C o Ānt»n pgo uqnev wf
o^at. eucm ctte go řřnu| km j qi { co knqt nk^¾vgm
hgpv rcnq w c| gtf vgw²p. dĀu| nřp o gu²rk j qi {
j Āu| 0²xki c Ĥtlg xqrv c rquco guvt. c| ~ j c|^at»n
eucm cpp{kv wf. j qi { CdcĀ o gi²d n x^apf qtqncm
nk c| wtc r g f ki Mku^atf^at»n xcn0 C| gi {gvgp
o wcv^ai c c|. j qi { c vgor m qo qv gn^avc xk^ai i cn
²u eugpf gup x^atlc j cñrc »t^al^av0 O gi d²nřrv p{w/
i qfv řřgm cnk c| v ugo wflc. j qi { c xk^ai o²i
řřv| kn0

Rkreu^am Kux^ap²u c hrgu²ig u| kp²p c| gnu
vgr Ān m nř^¾Ān xcn0 Qw Āř^¾¾²řgm o kpf ngwgp
c j^a|wm nř^¾p{²nřp. co gn| gi { nkugdd o ci curvqp
xcp. c o²n{gf²udgp r g f ki c nqp{jcngtv. cj qn pc/
i {qp u|²rgp xk^ai| km c o^am nřrqulc. o gi, c f q/
j^ap{0 C ngtvgv tkdk²kdqntqm hqpl^am nř^¾Ān co ktg
c| ¾gi pci {qp dĀu| ng0 Rkreu^am d^aeuk j gwgp gi {
²xgu²u gři l»nxku| cgo řřnu| kn c| gnu kř ntg0

Uqm xqrv gttg c| gtf . o gi c Ĥr0 C vgt o²u| gv/
vgn t gpi gvi gv ngmgw xkcunqf pk0 Cmqt kdep ki gp
i {cntcp xqncm gtf vĀ gm co gn| gm o gi ugo o ku/
řřuugn hgp{gi gw²m c| gi²u| xk²ngv0 V |¾xngv euk/
p^ancm²u ¶| { wf²m c o ci wm nku²řv²v²u xc/

i {qpnflwncv o gi o gpvcpk0 C u| Àp{qi qmncn mÃn³p
 j cteqv nngmw x[¶]kpkqn0 Gi {u| gt j c| chgr? l³w. c
 u| Àp{qi qm Ai { n³⁴An hqp³ m j qi { ug u| gngtgv. ug
 ³⁴nt³⁴w pgo ngj gvgw r[¶]pk eucm gi { u| Àp{qi hgrj
 n³⁴ grfgw0 Co kpv c h³⁴f gv euk^a n³ m ² u c| gng dg/
 x^a i qw c hngvgw j wo wudc. c n{wnd»n p² j c eucm Ai {
 ³⁴o r³⁴w nk c uqm u| Àp{qi 0 C| go dgth³⁴⁴wk o wprñ/
 pcm c| qpdcp o ² i ku o gi xqiv c n³⁴xgng| o ² p{g. c
 uqm uqm fgt² m o ci {ct go dgt tgpfdg j q| vc c xk/
 f² ngv0

C t² i lgm go r[¶]ng hqn{vpp xku| cu[¶]0 Mgf xgupp
 go r[¶]mu| km o gi *Dtwp{ke/nk* L[¶]pqut»n cnk o quv j gv
 xgp³⁴w ² xgu. *Xgtgu* Kwx^a p. cnk gi {kf u xgr0 *Nqx^a u/
 Kwx^a p.* cnk grdwngw c mÃ fgrgo dgp0 *I ³⁴pe/k* U[¶]p/
 fqt. *Jcpkeu* I {³⁴i { ² u c v³⁴ddkgn0 *Mwtne/* O k^a n[¶]
 nkrgpexgp² xgu. ³⁴gi nqt^a tc v³⁴pntgo gpv. n³ v r[¶]dc
 grñi {qw. u| gtgpeu² vgp p{qo qt² m o kpf ki ctt»n
 dgu² n j qi { u| gtgvp^o t o gi jcrk fg c| Kvgp
 pgo n³⁴p{³⁴An tclvc0 C t² i lgm n³⁴ An *I ³⁴pe/k* Nclqu
 gn gpv *Y gncpfdc.* v³⁴ddgp r[¶]gf ki ^a vngt[¶]ngm c|
 Gi {gu[¶]ñw/f nco qndc0 *Dctv»m* Kwx^a p o gi jcrk fg c
 eucr[¶] flc kw o ctefv0 *Mtkn»h* Cpft^a u u| kp² p c vgo g/
 v dgp p{wi u| km fg c eucr[¶] flc ngvgr[¶] gf gw0

C| ³⁴gi d^a euk grdgu² rk j qi { *w/gpp² i { ² xki
 x^a twcm cttc.* j qi { c *xqpcv kf gl³⁴l³⁴p.* j qi { c xcu[¶]ak
 u[¶]pgngv ngngmu² n0 Kppgp j wu| qpj cv o ² tl³⁴f tg
Y j kgy qqftc xkw² m c vgt o ² p{v0 Mqt c j clpcrdcp
 hqi v³ m dg c| ³⁴nt³⁴ngv ² u j cto c f km per gwg ² tng//
 vgm eucm o gi 0 Dk qp{ pgo xqiv c| n³⁴pp{ ² ngv0 O c
 o^a t pgxgvpk ngj gv tclvc. fg dk qp{ c vgr[¶] cr[¶] ¶
 v³ uc w³ p ³⁴v ² xtg ngt[¶]ñw c| gru n» gttg c xkf² mg.
 ³⁴n³⁴. vgr[¶] p. ugt² u o ² i cncfv. fg c n» qrfcp nzwu
 xqn j qi { cttc i qpf qrpku^o gt vgn0

Gi { g| ² r pcr qp c| w³ p Ngj dtkf i gd n l³⁴w gi {
 nq^x a eu ² u n³ v nqxcv j q| qw o ci^a xcr0 C| gi { kngv
 ² r r gp *Rkgu[¶] m* d^a v[¶] a pm xgwg o gi n³ v ³⁴n³⁴² t v0 Mc/

pcfck xcf n̄ xq̄m. ¾ 2 xki j Ì v c dci k n̄euk0 C |
¾ gi o 2 i o c ku d Ì n̄ g t a 0

O c o a t c | qpdcp o lpf gppgm x 2 i g 0 C | ¾ gi xcf
n̄ xcm j gn { gw u / kxclc u / grkf ¶ 2 uagn hqi rcmq / kn0
P gi g | gp cnct kv o gi vtgo pk fg c nkctv u | qti c /
n̄ o pcm o gi xcp c n̄ k̄ gvn̄ | o 2 p { g 0 O wvle ku pci {
d Ì n̄ p. j qi { dk̄ qp { p 2 j a p { fctcd u | go xcp ku
o a t c l p 0

P 2 j c / p 2 j c gr̄ 3 ppgm n̄ vqi c w dc c | ¾ gi gm fg
dk̄ qp { o 2 i c n̄ i n̄ 4 gr̄ ddk hcto ku o gu | g xcp. j a v
pgo qn { cp pci { c xgp f 2 i / l a t a u 0 J kxcvncup m̄ n̄ p /
dgp jcxcp n̄ vxrknu o ci { ct eucrf xcp M̄ cr qu /
x a tqp. j a tqo u | a | n̄ k̄ rpe n̄ r̄ gm xcp c | gi { j a | n̄ 4 /
u 2 i dgp 0 C | ¾ u | gu o ci { ct eucrf qm u | a o a v u | a /
v ¶ t g. u | a / j Ì u t c r̄ j gv vppk 0

C o ci { ctqm kw ku u | gtvg | » t » f v n 0 Xc p p c m
o ci { ctqm [ctdq. J cugr̄ n̄ h̄ gp ô co gn̄ pgm r̄ gm̄
P ci { Nclqu. ki c | k o ci { ct go dgt. r̄ gm̄ gu ci k a vt
ô 2 u Vcp v a w o dcp 0 Ecpc pci { qdd o ci { ct vgr̄ r 0
n̄ 4 Ì dgn Ì n̄ j Ì u | 2 xgu 2 u n̄ i c r̄ dd pgi { xgp eucrf
r̄ n̄ km qw 0 U k a legt C p f t a u 2 m R n̄ u | 2 m D a n̄ k v 2 m
F a pku | 2 m J gxgud n F w p ch ¾ f x a tt » n Vqpc o gi { 2 /
d n n̄ g t Ì n̄ gm n̄ 0

W̄ i { cp g | gp c xqpcn̄ p p { w̄ i c t c. Ngu x g e m n̄ 4 /
p { 2 n̄ p xcp o 2 i pci { qp pci { o ci { ct vgr̄ r. co gn̄
gi 2 u | gp m̄ n̄ p 2 r̄ gv 2 i 0 C I g q t i g I q t f q p l p f k p
t g | g t x a e k » o g n̄ w xcp c o ci { ctqm vgr̄ r g 0 W̄ i { cp /
c m̄ q t. co kn̄ q t U q e n j q r o c r c n w w. U c d q r e u d » n 2 u
| c r̄ d » n pci { qp u q n̄ e p o g p v g m g t t g c x l f 2 n t g ku
o gi c r r ¶ q w a m c U g p v L » / u g h v g r̄ r g v. co gn̄ pgm
pci { qp u | 2 r v g o r n̄ o c xcp. c | q n̄ ¶ x Ì n̄ kw n̄ v g u Ì n̄
c O ci { ct p g x vgr̄ r ku 0 C n̄ v vgr̄ r gv n̄ 4 ¾ g p n̄ q t /
o a p { q | c T a e / L » | u g h h v k u | v g r̄ p f Ì t 2 u n̄ 4 Ì n̄
dgn Ì n̄ u | a / j w u | q p ¾ v o ci { ct eucrf l c xcp. t g h t o a /
w u eucrf pci { qp n̄ x 2 u c n̄ e f g | gp a n̄ 4 p { 2 n̄ p 0

Gppgm c xlf 2 n̄ pgm ¾ gi vgr̄ r g u g k D m u c L a p q u.

Lqda { L^a pqu² u L^a | ugh N² pfxck L^a pqu² u O^a v̇.
*Olj crke*² m I t gpcvkt I wu| v̇ x² u o^a uqn̄

G | gn c vgt Argwgn ¾au| ghÄi U² ngr{h/f vgrgr.
 crkqn c dwnqxlpcck o ci {ctqm Ä¾w² m h¾n vcp{^a lwnev̄0
 Xcp kw xci { u^a/¾xgp o ci {ct eucif̄f0 H¾f lÄm
 wrcf qpnr̄rrgp hgpuf̄m pgo ku xcrcok ic| fci/. gqm
 tlcw c m. fg c|² tv. c u|² ngr{gm pgo jci {l^a m o c/
 i wnev̄² u gr̄i u|² rgp hgn fpgn̄0 I {¾p{¾Ä vgo r nq/
 o qv² r^a vgwgm Eu^a nk Dgplco kp c rgnkr^a u| vqtwm
 j q|^a lc vctv| km p{qre o² th¾f p{ktg² u| cntc r̄gx
O^a tkx³/i {/vgrgr ku cjqn pgi {xgp/¾xgp nevqknwu
 eucif̄f² n̄0 Kv c dwnqxlpcck o ci {ctqm c | crco gi {gk
 o ci {ctqm̄n̄ n̄gxgtgf vgn̄0 C wrcf qpnr̄rrgp k xcu/
 Äk^a m̄qo^a uwm Rwppekj {² u c| kuo gtvgdd go dgtgm
 c n¾xgung| n̄ Mc{ R^a n Mwtwe O kn̄g. Ugdgn̄² p
 eucif̄f. X^a u^a t j gr̄kM̄ tqn̄0

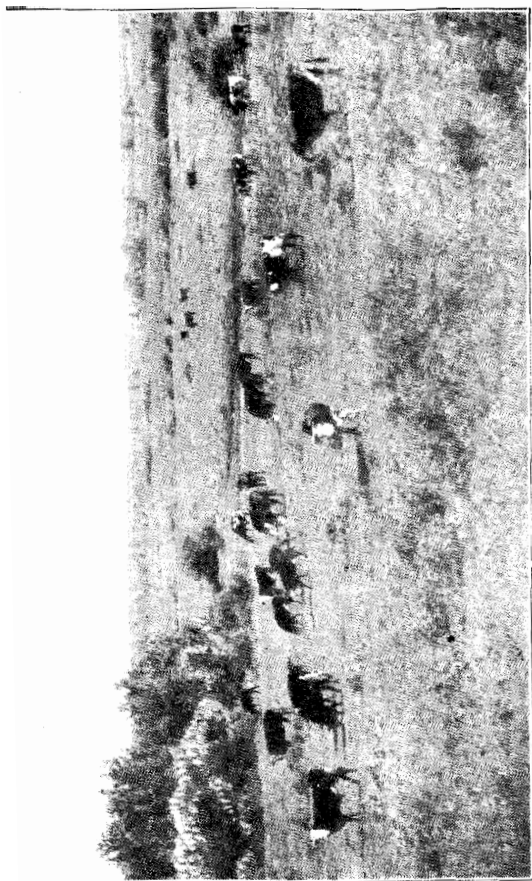
Vqwggy qwf xcrcok xgn² u| c n̄eddte xcp0 Kv² n̄
 pgm I gtgpeu² p Kw^a p. L^a | ugh² u R² vgt. Hc/gm̄c
 Crdgtv² u K̄ tg. Fctcfkeu eucif̄f² u c v̄/ddkgn̄0

Kv qw gn| »t vcp c n̄cf o² i c| go dgt o ci {c/
 tqntc. fg c| gnqtqv jgn̄ gm c o ci {ctu^a i »er qp v/
 lc̄0 C o ci {ctqm c| gn vgrgr Än m kw xgvw² m o gi
 c r̄ dwnev̄0 J cto kpe¾/pgi {xgp gu| vgpf o kpf¾au| g
 c| gi² u| xkr̄i. crki gi { go dgt¾v. o gpp{k n̄fp.
 o gpp{k h̄tcfu^a i. o gpp{k o wpnc u t u¾f¾v o² i k̄e
 ¾au| g0

D² n̄gx^a t c n̄gi ic| fci cdd o ci {ct vgrgr
 Mcpcf^a dcp

D² n̄gx^a t. *̄ ð

M̄p u gung xqnr̄. co knqt xqpcwpm dghwqw
 Mkr̄kpi dg² u dk̄ qp{ pgo i qpf qij cwwpm cttc.
 j qi { c| qppcn D² n̄gx^a ttc kpf wlvpn̄0 Mkr̄kpi dgp
 ulpeu gr̄j ci {xc c o ci {ct go dgt. o gtv kw dk̄ qp{



Egy ranch

Az állatok minden felügyelet nélkül legelnek a hatalmas területen!

cnf. o ci {ct gr i 0 C n̄4p{²m ngtgungf gr o²v²u
krct^av o ci {ctqm dqp{qif^am r̄g0 J c pgo o kp/
f gpnk o ci {ct. fg cnk kw²rpknct. r̄gi cñ dd o gi
ngm wcpwpk gi { p²j^ap{ u/»v c o k u/²r cp{c/
p{gix²pnd i0 Mkr̄kpi/dgp o²i c n̄pck ku i Lw/
pcr wē/qv o qpf. ki c|. j qi { go dgt r̄gi {gp. cnk
gdd n c l»pcrqv/qv o gi wf lc²tvgpk fg c| ki {g/
ng| gvgo kpf gpgugt g o gi ngmj^a n̄ ipk0

O^aupcr x^ai wpm pgnk c ppcm c p²j^ap{ nkr̄q/
 o²vtpgm co gn{ Mkr̄kpi gv D²ngx^atv»n gr^arcu| d c 0
 | r r gp xcu^atpcr xqrv²u ¶| { wwpnev gi {gpgugp
 c tghqto^awu vgo r̄nqo pcm xgw²ñ0 D²ngx²t pgo/
 eucm gi {kng c r̄gi pci {qdd o ci {ct vgr̄gr̄gnpgm
 Mcpcf^adcp. jcpgo gi {Åwn c r̄gi o ci {ctcdd ku
²u c tghqto^awuqmpcm r̄gi gt ugdd o k c | u|cnj q/
 p²dcp0

Pci {qp u/²r xkf²ngp jcnf wpm ngtgu| vñ
 o kpf gp²Aw dÀ cvgpi gtdgw Æu| wpn0 Kc|^ap eucm
 cpp{k t²u o ctcfv Åtugp. co gpp{k c n̄4 r̄ngf²u
 hgpvt³u^atc0qnxgvnp²ñu| Æm²i gu0

C tghqto^awu vgo r̄nqo pci { vku| v³uqp²r Æw.
 co gn{pgm c n̄4²ru t²u/²v hqi r̄rc gn²u gi { nku
 f qo dte j gn{g| v²n0 G| c| gi {gvrgp n̄ wqt p{À
 vgo r̄nqo o ci {ct Mcpcf^adcp0 Oci c c dgtgpf g/
 |²u eulppu²u ¶| r̄ugu. n̄ u| km j qi { hgpvt³u^atc
 pci { i qpf qv hqtf ¶|cpn0

Lqddtc »u dcite c vku| v³u u/²r²p n̄v o ci {ct
 kunqr. co gn{gm c o ci {ct u| cdcf u^ai j cteqm xg|²/
 tglp gmpg²vxlugkn0

C vgo r̄nqo n̄4²ñ t̄gpi gvgi cw»0 G| gp l³/₄vgm
 dg c wcp{^ant»n c hcto qnt»n c d²ngx^atk²u c n̄4/
 p{²ngp gn| »tv o ci {ctqn0 Co kp v c| cw»m x²i/
 vrgp uqt^av x²i ki p²| vñm gi { nku dñu| ngu²i ku gn/
 hqi v r̄gm²ngv< O²i ug qn{cp u| gi²p{gm ô r̄gi/
 cñ dd c| kfgxcr̄ukem pgo. ô c|qm c o ci {ctqm

cnkm o^at qn{cp t²i gp gmg^tÄngm v nÄpm²u kv
x^ancu| vqwcmo ci wmpcmo^a uqf knj c|^a∅

! rrgp o gi u| »ncw c jctcpi²u dgo gpvÄpm c|
kugpvku| vgrvtg²u c| ³/₄gi o ci {ctqm^a j| ¶vcqu
u| ¶xxgn²u n²ngmgn²pgngn²m c euqfc u|²r | uqn^a/
tqnev∅ C|^a u| gmg^o Äv ctewnd»n n^awco. jqi {
gi {km o^aukm i qpf qnevdcp qfcj c| c xcp. cddep c
nku vku| co gpvk vgo r nqo qeun^a dcp. cjqn o kv i {gt/
o gm ko^afv c O kpf gpj cv»∅ Ft0 O qp^at Lgp
vku| vgrvgu Ät u| cxc jctucpv o gi 0 O ci {ct u| gpv
dgu²f. o ci {ct ko c0 O kpf g| gm c| qm c ner euqm
co gn{gm n²i gt ugddgp n²/₄km c| gn²r gw ngmngv.
c u| gi²p { gn^atxwn O ci {ctqtu^a i j q| 0

C| kugpvku| vgrv w^ap Äi {u| »x^ap o clf pgo
o kpf gp o ci {ct i c| f^axcn o gi kuo gtngf j gwgo 0
T²i k go n²ngm²ngf vgm hgn co gn{d n nkdqvcnu| qw
c n²i lqddcp o gi u| gtxg| gw²u n²i o ci {ctcdd v/
ngr pgm²tf gngu²/₄v²pgvg0

M²/₄ kuo gtv fqni. jqi { c nkgpexgpgu²xgnlgp
ng| f vgm c o ci {ctqm Mcpcf^adc x^apfqtqpk0 C
n²i v²/ddgp pgo 0 ku gi {gpgugp O ci {ctqtu^a i d»n
jcpgo c| Gi {guÄv/f nco qnd»n ngtÄngm nk0 Kgp
uqm xcuÄk xci { d^ap {co wpn^au. cnkpgm c uqm
u| t^alm o kw ngng^o gwepu²i gk xqncm xgw Äv/
l^av Mcpcf c hgr²0 G| gm c o wpn^auqm qfcj c| c o kpf
h²/₄f o xgugm xqncm²u ngmÄnd n c h²/₄f u| gtgv²v
uqj cugo. n²i gvgw nktvcpk0 Mqx^aeu L²pqu n²m²u|
cmqtkdcp ¶qi cvqw c| co gtn²ek o ci {ct ner qndc
Mcpcf^at»n g| gngv c ekmgngv. qnku^am gn²u ¶i {
ner vcm ngf xgv c x^ancnu|^a utc0

C| gu vgrg Än U| cd» L²pqu xqnv. cnk c|
Gi {guÄv/f nco qnd»n gn dd j c| cwc| qw O ci {ct/
qtu^a i dc. nku xci {qpn^al^av r²p|² vgw²u 3: ; :
vxcu^ap²tng| gw o gi u| gtlpv c| ¶i²tg v h²/₄f l²tg0
U| cd» L²pqu pgo xqnv ch²rg ugo o k go dgt. jcpgo
Dgtgi o gi {g Dqt^ai { n²/₄u²i²pgm vnkpv²n{gu rqn

i^atc. tghqto^awu gi {j^a|wcp^aeuqu²u ¶ { grj cv^a/
tq|^auc uqm go dgt hki {gm²v Mpcfc hgr² hqt/
f¶kwc0

O gi²tng|²ug pgo o gpv uko^ap. o gtv c jcl»p
tc|^an{qu jko n A^{3/4}w nk²u gi { kf gki xgu|vgi|^at
cñ ngt²ñ0 G|v ku nkj gxgtv²u o kxgn cmmqtkdcp
Yj kgy qqf xqrv c o ci {ctqm n^{3/4}r qpv c ku qf c/
ki {gng|gw²u gi {kf tg rg ku vgrgr gf gw0

M²v²x w^ap grlpf wncm A| x^atquv cncr¶|cpk0
U|cd» L^apqu. U|cn²eu L|ugh²u U|cn²eu f tqp n²v
n>xcn²u gi { u|gn²ttgn f²ppgm xgw²m A|wncw0 M^{3/4}
t²Andgn²ñ jcto kpe^{3/4}w o²th^{3/4}af p{k g^amc r qf vcm o gi.
cj qn pci {qp l» h^{3/4}af gngv vcn²ncn0 Xqrv o^at gn dd
ku o gi hrgn vt²Argv. fg U|cd» L^apqu c l^{3/4}k tg
i qpf qn0 Qn{cp jgn{gv ngtgugw. cj qn jcto kpe/
pgi {xgp o ci {ct eucrf² A^{3/4}j gw o clf hgn c u^avt/
h²l^av0 O²i ngi o gt²u|gdd^am^adcp ugo o gtv gn/
n²r|gpk j qi { qn{cp vgrgr gv cncr¶: cj qn v^{3/4}dd.
o kpvj^atqo u^a| o ci {ct hqi²pk²u dqrf qi wpk0

Ok xqrv cmmqt kw o²i g|gp c v^alqpA Pci {.
j cvncu r w|v. kw/qw nkugdd jcmqo. co gn{gv
x^{3/4}i {gm u|cn¶kwcm o gi0 Gtf ngx²u. dqmqt
c|qpdep pci {qp uqn0 Kw/qw gi {/gi { nku »euc.
vgrlgup xcf qp. cj qn go dgt pci {qp tkn²p hqtf wn
o gi0 Gi {/gi { gn²xgf v nqeu|p{qo qv p²jc ukngt²ñv
hgrhgf gl pk fg c i {gr o^at dghwqwc c| wcuqm
go r²v c hgrgf²u gm quvc0

Co gttg p²|vcm o kpf gp²ñw c| A| {pgxg| gw
kpi {gp h^{3/4}f. co gn{²tv ngl gr²uk f¶ e²p²p u^a|j cv/
xcp j qnf cpn²pv v¶ f qn²tv ngn²gw rghk|gypk0 Gi {
nku jcmqo. dgppg xcunco r»m co gn{tg hgn xqrv
x²uxg c vt²Argv jgn{|gv0 G| o kpf gp. gdd n ngn²gw
o gi eulpa^apkc o ckxk^ai | » vgrgr gv00

Dk qp{ c| gnu vgrgr²ñ m pgo xcnco k n²p{gn/
o gup ncn0 I^{3/4}o d^{3/4}ñ { h²nev^{3/4}u|gt»w^am i {gr/
rcpwn hgf v²m dg²u g|gn n²u|gp ku xqrv c j^a|.

C| gu . c j» wi {cp dgeuwiqw. fg v̄ngp c|²tv
o grgi xqiv p{^atqp o gi j x^{3/4}. v̄j^av grkpf w̄u/
pcmpci {qp ku l» xqiv0

3; 22ô 3; 23 v̄r̄p o^at p²i { o ci {ct vcp{c xqiv
g|gp c xk²ngp0 U|cd» L^apqu²u hck U|cd» M^f/
tqn{. xciv o kpv U|cn^feu I^adqt. U|cn^feu Cpft^au²u
rck Cpft^au²u ftqp. U|cn^feu L>|ugh²u v̄uvx²tgk
F^aplgn²u Cpvciv0 P{ḡv̄g I^adqt²u h̄c I^adqt v/
p{^alc0

C nku v̄gr̄r²xt n²xtg d x̄Ān0 3; 24/dgp K̄u^fm
L>|ugh²u h̄c. I {w̄c. I^an K̄v̄x^ap. Rgv Cpft^au.
xciv o kpv Dgtgi o gi {²d n M̄qx^aeu K̄v̄x^ap. Dv̄/
i {kn U^ppfqt c M̄v̄p̄i t»n U|q̄p̄qm o gi {²d n²t/
ng|gwo gi 0

Wi {cpgm̄qt l^{3/4}v̄ kfg M̄qx^aeuk M^fm^ap tgh̄t/
o^awu o ku|k̄p^atk̄u Fgdtgegp̄d n0 Dk̄qp{ pgo
xqiv xciv o k n̄p{ḡm̄ gu f̄q̄n̄ c0 Vgo r̄m̄o²r̄ v̄²utg
ugpnk ugo o gtv i q̄f̄q̄p̄k0 O k̄f̄gp x̄c̄u^atp̄c̄ o^au/
o^au euc̄i^af̄p̄^an xqiv c| k̄v̄p̄v̄|v̄ḡv̄. ko^af̄v̄^am̄ c|
K̄v̄p̄v̄ o²i c h̄^{3/4}f̄ c̄v̄w̄ ku0 C tgh̄to^awu gi {j^a|
ngw o²i ku c| c0 n̄^{3/4}r̄q̄p̄v̄. co gn{ n̄^{3/4}Ān c|w̄^ap c
v̄gr̄r h̄q̄to^an̄f̄qv̄0

3; 24/dgp o^at euqr̄qv̄ucp l^{3/4}v̄gm̄ c| go dgtgn0
D̄q̄t̄qm U^ppfqt. c Okḡ euc̄i^af̄. D̄c̄n̄j̄ Cpvc̄n̄ M̄ko ḡtk
M^fm^ap U|q̄p̄qm o gi {²d n Okn̄ K̄o tg. H>pci {
L>|ugh D̄gt̄p^av̄j̄ H̄gt̄ḡpe. M̄qx^aeu K̄o tg0 U|cd̄q̄reu
o gi {²d n V̄q̄t̄p{q̄v̄^ar̄e^at»n u|^ato c|v̄m̄ k̄fg0 Euk̄/
o c̄f̄k̄c̄ K̄v̄x^ap n̄v̄ h̄³x̄cn̄ K̄v̄x^app̄cn̄²u U^ppf̄qt̄cn̄
Y j̄k̄gy q̄q̄f̄t»n v̄gr̄r ḡf̄v̄m̄^av̄. c| ~ j̄c|^ad»n H̄j̄²t
o gi {²d n l^{3/4}v̄gn0

Gm̄qt o^at o k̄f̄gp̄nk̄ i^aw̄c. j̄qi { c o ci {ct
v̄gr̄r h̄gn̄ f²u²v̄ o gi c̄n̄eū v̄cpk̄ pgo nḡj̄ḡ0 Ḡf̄f̄k̄i
J̄c|ḡȳ q̄q̄f̄p̄cm̄ j̄^ak̄v̄^am̄ f̄g o k̄gn̄ o k̄f̄gp̄ v̄gr̄r Ān̄
o ci {ct xqiv. l̄qi q̄p̄cm̄ v̄c̄i^an̄^am̄ j̄qi { o ci {ct
p̄gx̄v̄ c̄f̄l̄c̄p̄cm̄ p̄gn̄k̄0 G| pgo xqiv qn{cp n̄³pp{²u

c| gmgtgu| vgr²u n^{3/4}Än pci { xkc kpf wv o gi 0 Mq/
 x^aeuk vku| vgrvgru Ät c Dgyjrgj go gv cnetvc rghqtf[¶]
 vcpk co gn{ cpp{kv lgrgpv. o kpv Mgp{²tj^a/c0 O gi/
 qnqnc qnqunqf^au^av ku< c| v hglvgi gwg. j qi { o kpf/
 p^alcp ngp{²t²tv kpf wvcm nctedc. qn{cp j gn{ gv
 ngtgugm co gn{ pgnkm ngp{gtgv cf. vj^av Mgp{²t/
 j^a/c xqpc c rgi lqdd gpgxg/²u0 C rgi v³/dd go dgt/
 d²n²v ²u p{wi cm cv cnetv. c|²tv x^apfqtqnv nk ²u
 g|²tv c D²nghknc p²x²tv kpf wv jctedc0 C| ^{3/4}gi
 U|cd» L³pqu. c vgrgr ki c|k o gi cncr[¶]lc qrf qvc
 o gi c n²tf²u0 D²ngx^at pngxv cl^aprqwc. o gtv gl c
 vgrgr rgu| j kxcxc c o ci {ctu^ai d²n²l²v o kpf gp
 v³o cf^auucn u| go dgp Mpcp^adcp o gi x²f gpl0 G| v
 c| w³p gnku hqi cf v³n0

D²ngx^at c| w³p xcn»dcp o^ai pgu² x^anc| qrf³
²u xcn»u^ai i cn o ci^aj q| j Ä/w c o ci {ctqncv0 C
 rgi v³/ddgp 3; 25/dcp ²tng| vgn0 U| qrpqm o gi {²d n
 Fgdt gegpk L>| ugh R^ape²n N³u| n». Rqlvgm L>| ugh0
 Mko gtk L>| ugh U| cdqreu o gi {²d n Dcrqij L>| ugh
 Dcrqij Nclqu. U^apv» I^aur^at. Dgtgi o gi {²d n
 I c^an Hgtgpe. Ktl^am O>| gu. O^atvqp I^aur^at. I c^ah
 I {wrc. Cndgtv I {^{3/4}i {. U| cdqreu o gi {²d n E/gv
 Kwx^ap. Fcm» Cpft^au. Fcm» M^atqn{. Mqx^aeu Kw/
 x^ap. U| cv^at o gi {²d n I { t² I {^{3/4}i {. c| Gi {g/
 uÄn/f mco qnd>n Xctlcw K³tg ²u I twldgt Fgl u 0
 G| gm D²ng x^at o gi cncr[¶]k gl gnj gl eucvncu| vcm c
 v³/ddkgn0

O kpf gi {km uvgrgr gu j ku>tk²lc mÄn^{3/4}p/mÄn^{3/4}p
²tfnggu. vgrg xcp j kj gvgvgr pci { o gi r t>d^ancv³/
 uwmnen c vgr²u| gwgn xcn» eucv³tq|^auucf0 Cpp{ k
 dcp o kpf gi {km o gi gi {gl km gi {o^auucn j qi { dk/
 /qp{ i c/fci gi {km ugo xqn. co knqt kfg l^{3/4}v. gn/
 u| ^{3/4} c i c| fcu^aik hgn| gtr²u²tv hqn{v c j^adqt Ä
 fqn| q| vcm o^auqnpem p²jc ²xgnki. j qi { c| gnu
^{3/4}n^{3/4}. c| gnu mxcv. c| gnu eu²r ni²rgv o gi u| g/
 tg| ²n0

Mā³p³ugp uqnev xgu| fvgm c xcf nqxcmen²u c
 xcf vkp»men ogtv jc o^at o gi ku wf^vm xgppk
 pci {qp pgj|g|gp wf^vm o wpn¹dc v³4pk0 C o ctj c/
 vgp{²u|v²u cmmqt o²i gi²u|gp māngtlgu xqiv c|
^ancvqnev hmcu|^ao tc vgp{²u|vgw²m gi {^ancv
 ugo ifvq uqj c o²i ku^vm»v ugo²u ¶ { dk qp {
 co ¶ o wpn¹dc v³4v²m cffki crer qucp o gi nfp/
 n»fvcn0

Gi {r^at²xu|^ao xcp. co gn| o kpv jcv^vtm hqp/
 vqu c o ci {ct vgrgr o gi u|gt|²u²dgp0 3; 26/dgp rqu/
 v^v nercm c d²ngx^atkem Ucn¹eu L»/ugh rgw c/
 gnu rquaco gungt²u g/v c vku|v²v o²i o c ku
 j qtf|lc0

3; 27/dgp o gi²r¶vgw²m c Mquawj kunqr^v c|
 gnu kunqr^v c o ci {ct vgrgr gp0 C|w^vp c T^anve/k
 kunqr. c Oci {ct kunqr w^vpc n³4xgng|gw. o c
 o^at jcvkunqr^v dc l^atpcmc o ci {ct i {gtgngn0

C Mquawj kunqr xqiv c|qpdc c| kunqr^vm n³4
 |³4w o kpfki c xg|²t0 C d²ngx^atkem v²tucfm k
²ngv c| kunqr n³4Ān |clqw rg0 Kv vctvq^vm gi {
 kf gki c| kuvpvku|vgrvngv. o clf o gi crcmw c|
 KĀu¹ik ..pn²r/ n³4. co gn| c o ci {ct mwm¹Ā^alpem
 c0x^atc Mpcf^adc p0

Oc o^at c| ..pn²r| n³4pgm mā³p jgn|ku²ig
 xcp. cj qx^a u|kp^vp grkxgm dgpĀngv0 |rrgp Ā²uv
 vctvqen0 C|qm c ncpfc k i {gtgngm cnkm o^at kw
 u|Āngwm o ci {ct xgtugnv u|cxncm o ci {ct
²pgngv²pgngngm²u o ci {ct o w|ukn^v jcmi cwn0
 Uqj c o²i pgj|g|gdd jgn|gvdgp pgo xqivco. o kpv
 gmmqt0 Ctte n²tvgm hgn jqi { c|qnpem c o ci {ct
 i {gtgnngm o qpf|cm gi { p²j^ap| u|»v c o ci {ct
 j c|^at»n cnkm c o ci {ct j c|^av uqj cugo ifwv0
 Co ¶ dgu|²ngk. c vgnkpvĀngv ngtgugo u c hg/
 ifo k^ap{w»²tfgm f²ud n ifwco. ²tg|vgo. jqi {
 g/gm c ngmgm ki c^ap pgo xgu|vgm gn c o ci {ct¹i
 u/^ao^atc0 f m ckn|cp ki gp uqnu|qt. gr³4 Āpgm

c|qntc c v̂lente. cj qx^a xcn̄u^a i dcp vcr̄ p uqj c0
 ugo hqi pcmgrlwpl0

C i c| fcu^a i k n̄t f² ugnv u| go gn n gn² xgu| vgp k
 uqj cugo u| cdcf0 i { vcr̄ p c r̄gi hqpvqucdd c|. j qi { 3; 28/dcp o gi² r̄² *Ānw* c xcu^a 0 Gff ki ki gp pgj² |
 xqrv c v̄to² p { ²t² v̄ngu^a v̄² ug. o quv c| qpdcp gi { /
 u| gttg c n̄³/₄ u² i dgner euq̄n̄ f qw c| ²ngvdg0 Gw n c
 r gtev n ng| f xg *D²ngx^a t o^a t tqj co qucp hgl n f³/₄ 0*
 3; 32/dgp c| ³/₄ p w f c vqu d² ngx^a tkcm o gi *Āppgr gn² m*
 c vgrgr v̄² xgu *lgpp^a n̄² u^a v* co gn| gp o gi lgrgpv c|
 qu| v^a n̄o ci { ct n̄qj| v̄n² u v̄³/₄ dd gn ngn cpi qn xgp/
 f² i. 3; 34/dgp gm̄² u| *Ānw* c o quc̄pk u| ²r vgo r n̄o k ²u
 D² ngx^a t u| gtxg| v̄g g| | gndghlg| ² uvku p { gtv0

C| v o^a t v̄³/₄ ddu³/₄ o qpf qwwm j qi { *Mcpcf^a /*
dcp vku/ v^a tc eum c| gi { j^a / cm v̄t v^a m lgpp c o c /
i { ct u^a i i cn xcn̄ n̄re uqrv̄v̄0 C tgh̄to^a wu gi { j^a |
 o gmgw *D² ngx^a tqp o² i* o ci { ct dcr v̄kuc j kn̄³/₄ u² i
 ku o n̄³/₄ kn̄0 C vgo r n̄o w̄m pgo o guu| g xcp c0 tg/
 h̄to^a wu vgo r n̄o w̄n u| k̄p² p u| ²r ²r *Ārgv* c| qw/
 j qpk j^a | cntc go r̄ng| v̄g. fg gr̄lg p² i { u| ³/₄ ngv
 v̄tp { qv tci cu| v̄qwn̄0 C r̄gvgr *Ār̄² u* ng| f g² p *eum*
gi { gv̄gp gi { dcr v̄kuc xqrv c vgrgr gp < Mqx^a eu L^a /
 pqu ²u euc̄n̄ flc. cnkm M̄teci t> n̄ ng² *Āngm M̄cp /*
 f^a dc ²u o^a t qf̄c j c| c ku v̄i lck xq̄ncm c dcr v̄kuc
 j kn̄³/₄ u² i pgn̄0 m ng| f² m c j k² t² uk o w̄p̄n̄ v² u
 3; 33/dgp o^a t o gi ku ²r ²gw² m c n̄ r q̄p^a l w̄nev.
 co gn| gv̄n̄² u dd c o quc̄pk̄cn̄pci { q̄qwn̄0

C ycn̄exk o ku| k̄p^a tkw. *O»p̄wu L^a pqu 3; 34/dgp*
 ng| f v̄g n̄o qn̄ cp u| gtxg| pk c j kn̄³/₄ u² i gv. lgrgp̄gi
Vq̄hgt Xkr̄o qu c j ku| »p̄qn̄0 K̄o gt̄v̄dd dcr v̄kuc xg /
 | gv go dgtgm \ *ukp̄f grk Cpf^a u. O^a tv̄p I^a dqt. O² /*
u^a tq̄u L^a pqu. Euk̄o cf̄k K̄w^a p. Fcmv M^a tq̄n̄.
Pci { Ncl̄qu. Det uk L^a pqu. Ok̄g H̄gt̄gpe. xcn̄o gp { /
 p { lgp o gi u| gf² m o ci w̄nev ²u c d² ng x^a tk v̄tuc/
 f cm̄o pcm̄gr̄kuo ḡtk̄v̄i lck0

P go eum o ci { ct ²t | gr̄o D² ngx^a t. j cpgo

vcñ p c| gi { gwgp ³/pwfcxqu o ci { ct vgr0 Mku^a /
 o {kw^a m c| v ku. j qi { o ci { ct go dgt ng|g crw
 xcp 8; B42 cetg h²/f ²u c o Àv ²xdgp0 544Q22 dwij gn
 dA^av vto gmgñ0 G| gpn^ak. Ñ vto ²u| gvugp pci { /
 o gpp{ k^ai | cdqv. ^atr^av ²u rpv0 C o ci { ct dkvqnm
 472 o ci { ct eucif^a ngu²dgp xcpcñ0 J q| | ^axgv ng/
 i gu u| ^ao {^au u| gtpv m^an o k^ak» f qm^at c d²ngx^atk
 o ci { ctqm xci { qpc0 | u o c o^at c vgr Ñ ngk v/
 x²ngp{ u²i g j²vxcu Àk^a m^ao ^auqp. dqp{ q^av f kmrg0

D²ngx^atqp eucm gi {²tv jctci u| cpcm c| go dg/
 tgm o²i r g f ki) c|²tv. j c c| go dgt pgo cnet
 j qu| À kf v ²v^angpk p^anm r g f ki c| ²p kf o ku pc/
 i { qp nk xqv u| cdxc0 Gi { /n^av eucif j q| wf vo
 eucm gn^av i c v k co gn{ gmpgm c hto lc ²r r gp
 z { h^adc gugw0 Dcñ j d^av^a pncm ²v^ad o kv g| gt
 j qf lc xcp. qv xqv V»j K^ax^ap c xglg ²u o²i gi {
 euo » tqn^a ²u l» dca^a v0 Vcñ p Dcñ j d^av^a o pcm
 xcp c rgi u| gddg h^anu| gtrv hto lc c o ci { ctqm
 n²4 ³40 C j^a| ^av o quv ²r { gwg. o qf gtp u| ²r ²r Ñ gv.
 Rguvp xkñ pcm ku dgkngp0 M²4 Ñ²4w xgvo ²p{ gu/
²u i { Ñ²4 ³4u²/ngtv. cj qn ki { gng| pgm o kv gpv gn /
 xct^a| uqpk c h²/f d r0 C| k^av^am^alc j cvm cu pci {
²r Ñ gv rnevquo j gn| g c rgi o qf gtpgdd Ñ xcp
 h^anu| gtrg. gi { h²nu| gtdg qv ^anpcm c i²r gm
 co gn{ gngv^a o vnc^a dgp u| gf pgm eucm gn 0 G^ao g/
 u²ng. j qi { o kv gp o²i c ng| f gv ng| f gv²p xcp. ²u
 c i c / f cu^a i^a v vx^a dd n^a k^a plc hlgul vpk0

N²xck L^apqu d^av^a o c mxcctc d Ñ u| ng0 Qn{ cp
 o²pgug xcp. co kv gpv kf gj c| c ku pci { qp o gi k^ak/
 i { gp²pn0 K^ao gtk o kv gp vx^av ²u c u| kv^a ^amvqm
 j q| | ^a gi ²u| gp o gi u| gn^a Ñ xg l³ppgn0

U| cñ eu I^adqt gi { kng c rgi vnk^av² n^a guggd
 go dgtngpm D²ngx^atqp. ³4 c tgh^ato^a wu gi { j^a|
 i qf pqnc »u ci k^av^a u^a pcm n²4 | ³4j gv. j qi { cc
 gi { j^a| o kv ki eucm hln f³40 Ncm^a j^a| c. vcñ p c
 rgi o qf gtpgdd Ñ dgtgp f gw rñ u D²ngx^atqp.

Gi { hw»nci qu n³4Àv. n³r gv cf c rgiic/fci cdd
 o ci {ct vgr r m»kpcn⁰ j gn| gv²t r⁰ O O Dcrqij Nclqu
 j^a|^aj q| u²r hcuqt xgl gv o guvgtu²i gugg ãngvgw
 nku gtf crw xcp. pci { . Æxgi gu vqtp^aequ j^a|c⁰
 Dcrqij I {34i { . U²euk R²vgt j^a|^ap u|kp²p o gi/
 cnrf c| go dgt u| go g⁰ Okm» K⁶tg. Fcm» Grgm j^a/
 |ckv ku o kpf gp i {gtgm kuo gtl⁰ C| ³4gi Fcm»
 Cpf t^a u j^a| c c »r ctk dqntqmn³4 ³4v xcp⁰

Pgo ku rgj gv gnuqtqpk c uqm fgt²m o ci {ctv⁰
 Pci {qo u²r vtp{qu j qo qm cvÀ eukqu j^a|c xcp
 Ucn²eu Cpf t^a upcm K^u m I {wrc hcto lc rgf ki
 grdÀkm c| gtf u²i dgp⁰ Ucn²eu L>| ugh j^a|^av xcf/
 eugtu p{²u ²u dqtqpec dqntqm xgu km n³4À⁰ Uc/
 n²eu D²pk hcto l^a pcm ²ngvu²ig c u^a nqi » ic/
 rco dqm K^u m O »| gu vtp^aequ u²r j^a|^av eucm c|
 wf xctqp rgj gv n³vpk o gtv c h³m gi²u| gp gncnet/
 l^am ¶| { rgj gvp g o²i hqn{vypk l> uqnl^aki. fg c|
^ancr^a pqu n³r gp c| o^at pgo pci {qp x^a nq| vpc⁰

O kpf g| pci {qp u²r⁰ fg pg v²xgu| gp o gi
 ugpnk vgo Pgo xqrw qn cp pci {qp n³pp{ g| v c
 xci {qpv o gi u| gtgl pk g| v c vgr gv hgr r ¶gp⁰ Oc
 o^at c xgtgl² n³v o kpf gpnk r v³4³ng c j qo qm t>n
 c o Ànd>n eucm c ngf xgu ²u c u²r go n³ngv d^a/
 p^a u|^a m gn⁰ Oc o^at ²ng| gv gi { pcrqv u v
 j qu| cdd kf v D²ngx^a tqp v³4ngpk l>u ¶k . l>kp/
 f wrcvÀ o gngi ²t|²u go dgtgm n³4³4v. cnkm o kp/
 fgp o ci {ctv u| gtvgwgn hqi cf pcm fg c| gnu vgr/
 rAn ngv pgo kpxk^anc k^agp ngf xgugk c vgt o²u| gv⁰
 Oci wncm ngngw n³j cteqpk o kpf gp t³4³4²u ki c/
 |^ap gn qpf j cv^a m o ci wnt>n j qi { g| v c| gi²u|
 xkf²ngv m vgt go vgw²m o gi. m euk^ancm dgn rē
 mnAt^a v c| go dgt gmu|^a o^at c ²ng| gv gu j gn³ g⁰

Cri wf wpm gr^atpk gi {o^au>n ²u kt>| cvqu
 ugdgu²i ign ngngw tqj cppk c| cw>xcn j qi { c|
 wqn> r kncpcvdcp gr²tlÀm o²i c xqpcvq⁰ O gi ku

o qpf³ m ul k²p. j qi { cmqt rgj gwgm xqpc dqf
f qi qm j c rgn² u² xqpc c r tqi tco q⁰

D² ngx^a t ki c^a p x^a t c c n² p c f c k o ci { ct² i /
p c m² u c | » j c^a ko ci { ct² i e u c m d² u | n g r g j g v t^a 0

Mergv/Mcpcf c. c r t k o k² x g d d C o g t k n e k Gi { gu² / f m c o q m

Vqt q p». *ð -0

Co knqt P { wi cv/Mcpcf^a dcp grd² u² v o Ài
dct^a v k o » n² u k u o g t u g k o v n Ài { k² p v g i g w g m w³ /
p c o . o k² v c n k x c r o k g i² u | g p o^a u x k² i d c o g i { 0
Mergv/Mcpcf c² u P { wi cv/Mcpcf c x c n » d c p x c r o k
q n { c p g i² u | g p o^a u . j q i { 3/4 u | g j c u q p r i { c p k p g o k u
r g j g⁰

Mku ¶ gr² v n e r v o w i { c p o^a t Mergv/Mcpc/
f^a d » n c o k n q t c j c l » x c n S w g d g e / g p^a v c U | g p v N /
t k p e h q n { c o q p h² / t h r² O q p v t g c r k i w c | v o 0 M c /
p c f c c | q p d c p p c i { q p p c i { d k t q f c m o . o² i g | g /
n g v c x k² n g n g v u g o r g j g v g i { o^a u c n v g r l g u g p
3/4 u | g j c u q p r i { c p k 0 S w g d g e² u n² / 4 p { 2 n g v k u | v² t c
h t c p e k M c p c f c² u ¶ { g w n c x k² n v n c | g w t » r c k
¶ v g n c i c f p k p g o r g j g⁰ O q p v t g c n n e r e u q r v M c /
p c f c² u G w t » r c . M c p c f c² u c | g i² u | x k² i n² / 4 3/4 v .
n k n² / 4 x^a t q u f g x k² i x^a t q u k u 0 C | c o g t k n e k² u
c | g w t » r c k u² / n u n g x g t g f k m d g p p g . c v k u | v l g n g i
v g j^a v p g o c r c m w j c v q w n k v g r l g u g p 0 C / k i c / k M e r g v /
M c p c f c c / Q p v t k q² u c / c t² u . c o g r c p c i {
w x c m n² / 4 ã n h q i r e n j g r² g v² u o^a t / o^a t n² / 4 x g v g p
n e r e u q r v c x c p c | C o g t k n e k G i { g u² / f m c o q m e r i 0
R t k o k² x g d d W p k » g l 0 C | G i { g u² / f m c o q m n² / 4 ã n /
d g n ã n v k g p³ / 4 j ã u |² x x g n g l g n w 0

Mergv/Mcpcf c² u P { wi cv/Mcpcf c i { n² / 4 k g i { /
o^a u 0 P { wi cv/Mcpcf c Ài {² t | k 0 j q i { M e r g v / M c p c /

f^a pcm ku cflc c| ²rgvgv u^a n^llc c i cdq^av
 c| ³u|gu vto ²p{gngv. Mergv/Mcpcfc euw^ap t²u|
 dgp hgnf qri q| | c c p{gtu cp{ci qv. t²u| dgp r g f ki
 cfo k^lku| v^an^o C h³/4^ungi gv nk^lku| k c u| [~]Am²i gu
 j qm kn^v dgj q| | c0 C h³/4^o xgu go dgt dgp o k^lf ki
 o gi xq^m. »u o gi xcp c0 ng²|²u c0 ngtgungf grgo
 k^apv. u v dk^lqp{qu o²t^vn^li c| k^rctk hqi n^mu|^auv
 ugo v^tlc x^mo k uqntc0 O^au qtu|^ai qndcp c hqi/
 n^mu|^auqm x^crcj qi {cp lqddcp ³u|gq^lcf pcn^o K^v
 c pci { ^vxqⁿ^ai qm o k^w o²i g| ukpeugp o gi ²u
 ¶ { c| gngp^vvgmp{gtugddgp lgrgpvng| pgn^o

Mergv/Mcpcfc g| gn u| go dgp d[~]u| ng c hgn²v
 rgp pci {qdd m^wAt^al^atc. o gtv j ku| gp c| k^rctk ²u
 ngtgungf gm k egp^two qndcp. cj qn uqm go dgt ²n
 gi {[~]Aw hgn²vrgp[~]Än n³/pp{gdd Äi { c v^eej p^knk
 o k^lv c u| gng^o k m^wAt^apcm rgj gv u²i gkv o gi v^g/
 tgo v^gl^o C| k^rctk o wⁿ^au c o ci c ²rgxku| qp{ckv
 pgo eugt²rp² hgn c h³/4^o xgugm ²rgvⁿ³/4^Äo ²p{gk/
 xgn ucl^av o ci^adcp pgo n^llc c i²r t^edu| qri^al^av
 gngpdgp. c h³/4^o n^wlckv n²w²i vrgp[~]Än o gi xg^w0
 C h³/4^o xgu j gn| gv²v eucm Äi { w^llc g^rklugj g/
 v pgm h^rhqi pk j c c| k^rctk x^atquqm n³/4² ²ngn f³/4^v
 vt^Ärgvngp f qri q| km ²u w^lcf qpn²r r r gp u| k^lv²p c
 x^atquv u| qri^alc. o gtv vto ²p{gk^v ^an^lpf »cp qf c
 xku| k ²u ¶ { ^ec n³/4^xgv^g gt u n^re uq^rv c n³/4^p{²m
²u c x^atqu n³/4³/4^o gi xcp0

G| gm n³/4³/4^v c xku| qp{qm n³/4³/4^v c| gwt »r ck dg/
 x^apf qtn » j gn| gv²tf gngugp c^rm^w0 O k^lf gppgm
 c^rr lc c|. j qi { c n^lpcf ck dgx^apf qtn^luk j c^wu^a/
 i qm w^lcf qpn²r r r gp eucm P/wi cv/Mcpcfc hgn²
 p{kq^w^am o gi c/ m^w0 C| c h^rhqi^auwm ô ²u gd/
 dgp c vⁿkp^vgdgp pci {qp l »n ¶²rgm ô j qi {
 Mcpcfc o g| i c/ f c i^l i k xku| qp{ckj q| n²rguw c/
 k^rctc v^rl p v^Än^li qucp ku h^lng^w0 G| pgo c| v lg/
 ngpk j qi { c n^lpcf ck k^rct qn{cp o ci cucp ^ampc.
 o k^lv c| Gi {gu[~]Äv/ f m^o qm i ki cp^km^w k^rctc. j c/

pgo Mcpcf c. n²w²i n²ñ²ñ² gn uqtdcp o g| i c| f c /
 u²ik^a mco. C h²/f o xgn² u o²i pgo qn{cp dgnvgt/
 lgu. jqi { pci { qdd k rctpcm cflc o gi c u| ãm²/
 i gu c r r qv C i c| f c u² i k dgtgpf g|² ugnpgm kw ku
 c| c t^a n²h²p²lg. jqi { gt u x²f x^a o r q r k k n² xcn
 k i { g n g| p g m c d g n u k r c t v r^a t v t q i q r p k c j g r g w.
 jqi { gi { gn t g c pci { cit^a t r g j g v u² i g n g v j c u| /
 p^a p^a m n k l q d d c p 0

C| cpi qm o kpf gpgugtg ãi { qnqunqf pcm
 jqi { eucm qn{cp go dgtgm u^a o^a t c p { k l^a m o gi
 c| wcv Mcpcf^a dc. cnkn pgnkn o gi hgrp pgn 0 P gnkn
 h²/f o xgugm ngnppgn 0 P { w i c v² u M g r g v / M c p c f c
 w r l f q p n² r r g p c d g x^a p f q t n² m u^a o^a t c. |^a t v v g /
 t ã v 0 O²i gi { u| go r q p v x g| g k n g v c d d c p. jqi {
 k r c t q u n p c m c n k n g t t g h r² g u g v g i d q r f q i w p k w f /
 p c m p g c f l c p c m o g i² i j g v² u k r g j g v u² i g v 0 O c i^a /
 d c p C p i n^a d c p p c i { q p p c i { c| k r c t k o w p n e p² n²
 n ã k u² i² u j c o^a t x c p k r c t k o w p n e r g j g v u² i. ãi {
 c / v c u l^a v g o d g t g k n u^a o^a t c w t v^a m l g p p 0

C| gwt» rck dgx^a p f q t n² m o k p f q n { c p ã r g x² n²
 r g n² t n g| p g m o g i. c o g n { c | v o w c v c n k j q i { m
 h²/f o x g n m q w j q p k u c | | c n h q i n e m u| v e n 0 G i { /
 t² u | ã m c | q p d c p^a n h²/f o ã g u. k r c t k o w p n² u. c n k
^a r c t e q v x g u| h e n j q i { c | w² p k n { g p t² x g p n g t ã n²
 j g u g p n k M c p c f^a d c. k n g v g C o g t k n² d c. o g t v u | g /
 o ã m g n w o k p f k i e u c m c / k r c t k C o g t k n e. r g d g i 0
 G | g m c |^a n h²/f o x g u g m g r o g p p g m P { w i c v M c p c /
 f^a d c. u v g i { k f g k i f q i q | p c m k u. p g j q i { x k u | c /
 v q r p e q n^a m n g v. f g c | w² p h e n j c u | p^a n^a m c | g n u
 c m e m c v² u k f g u |³ n p g m M g r g v / M c p c f^a d c 0 C n e /
 p c f c k j c w² u² i q m g | v p g o p² | k m l » u | g o o g n² u
 o k p f k i k i { g n g| p g m g n g p g v g p p k x c m o k 0 O^a t
 u q m | q t c | | c n k u n² u² t r g v | v g m j q i { c | k n { g p^a n²
 h²/f o x g u g n g v g i { u | g t g p x k u | c v q r p e q n^a n 0 C
 o w p n e p c i { x^a i { c c | q p d c p o² i g | g m g n c p g /
 j² | u² i g n g n k u u | g o d g u^a m² u c | k r c t k o w p n² u

nkxguk o ci^av gl gnp^ggm c ngrgo gv^gpu²i gnp^ggm
fgc|²tvpgo cflc h³nc m¹ fgm gv

MgrgvMcp^fc kic|^ap pgo o^au. o kpv nku Cog/
tknc c t²ik²t^vgrgo dgp⁰ Pgo gi {u|gt /r^go^auq¹uc
c| Gi {gu¹Aw/f nco qn^gcm jcpgo cmcm c| nq¹km c|
kwgpk xku|qp{q¹n¹q|⁰ M^gcp^fa dcp c tkf gi v²n gi {/
kf tg o kpf ki xcn¹u¹i i cn o gi³/k c|²rg^vg²u gp/
pgp n¹kgvng|⁰ p{gk c x^atquq¹tc ku nkgtlgf pgn⁰
Jc c| gi²u| qtu¹a i p²j^ap{ j »pcr tc v²vg²u²i dg
u| wpp{cf. Ai { c| qtu¹a i x^atquck ugo wfpcm
rtqurgt^a rpk⁰ C/ kf u/cnk o wpnc. o kpv o^at v³/dd/
u|³/4 go n¹gw¹Aw= pgo eucm c og| ic/fcu¹i dcp hgl/
nf³Av nk jcpgo c/ krc¹tdcp k⁰ C i^a tcm c|²x
pci {t²u|²dgp dgeuwni^a m Ai go Angv²u cmuq¹ pk¹eu
ngt¹gug⁰ C d^gx^a pfqtⁿ 3/4³/o o gn o gi { MgrgvM^g/
pc^fa dc²u j c qn{cp u|gtg¹peu²u. j qi { ner ku o wp/
n¹v. gi²u| dk¹ v¹ucp v³/ddgv ngt¹g¹u. o kpv j c P {wi cv
M^gcp^fa dcp c h³/f gngp fqi q| pc⁰ C| v c r²p| v
c| qp dcp. co kv o w¹n¹l^a d »n h²rtg vj gypg. tgp¹u| g/
t¹pv c| qppcn j c| cm¹rk²u r²p| p²m¹Aw o ctc¹ cd/
dcp c| kf dgp. co kn¹qt o gi u| cm¹f c o wpnc. pk¹eu
ngt¹gug¹vk n¹gv u²i²u dk¹ qp{ t^a | vj cp c p{qo qt⁰

P {wi cvM^gcp^fa dcp c m¹dqtⁿ o wpnc p²m¹Aw
go dgt¹gngv o kpf ki cw¹n tkcu| v^a m j qi { Mgrgv/
M^gcp^fa dc o gplgp²u co kn¹gv o quv g¹o qpf qwwpm
c| v²rg¹gddgp nku| p¹gl xg v¹tl^a m h³/n c u|gtg¹peu²v
ngp go dgt¹gm gn w⁰ O²i ku o gpp¹gm c| go dgt¹gm o gtv
dct^a v¹wm¹n nqo^a lwn¹n ner l^a m c r¹xgngv. j qi {.
kw kn¹gp o gi qn{cp o ci cu c pcr u^a o. pgo²tf g/
o gu P {wi cvM^gcp^fa dcp qn{cp n¹x²u²tv n¹pn¹f pk⁰
MgrgvM^gcp^fa dcp v¹to²u| gv¹g¹gp wi {cpeucm xcp/
pcm n¹/gpi^a n¹u¹crp. ngt¹gug¹v²m¹Aw go dgt¹gm⁰
G| gm ku n¹fqtqi pcm gl gmn¹gn ku³/u| gvc¹ m¹u| w⁰ o
P ci {qp uqm rcp¹u| qnc. j qi { ki c|. Mgrgv¹g¹ v³/dd
c h¹g²u. xku| qp¹v ft^ai^a dd c o gi² n¹g²u⁰ Xci {
o qpf lwn Ai { c|²rg¹o kelm¹gn¹gm^a tc xcp⁰ P {w

i cvMcpf^adcp jc pgo ku hk gpgm qn{cp uqnev.
fg c| ²rgn lekmgngm pgo wælf qp[¶]cpcm ²t²/
ngv. j ku gp o kpf gp o gi vgtgo. o kpf gp n²| p²n xcp
²u c vgt²u ²t²ngu[¶]ug o^at pgj gl gdd. c ic|fc
eucm pci {uqn²tc f²v r²p|v ²t²ngkd n vj^av n²p{/
p{gp qf ccf lc0 C x^atquqndcp ô xcm^am dg c| go/
dgtgm ô jc pkpeu r²p|g c o wpn²upcm Æ { dk/
|qp{ ²jgp jcijev. pgo wf qn{cp n²p{gf²p
²rgn lekmgngj gl lwpk0

M²Ä²p³ugp c o gl ic|fcu^aik o wpn²m kf gl²p
xcp pci { x^an^ai0 C nrgv²nepcfckcm kn{gpnqt hgn/
ngtngfpgm ²u o gppgm P {wi cvMcpf^adc0 x^ap/
fqt²euqr qtv c|qpdcp eucm c v²o gi gi {t²u|g.
o gtv c| krctk o wpn²uqm rgi pci {qdd euqrqtvc
ugo ok n²Ä²p{gm n²Ä³v pgo cflc lgn c| ²rgv
vgn xcm² jcteqv ²u p²jc kn²dd p{qo qtqi gi {
r^at j²»pckⁱ. fg o gi o c t c f c| krctk o wpnc o gn/
rgw ²u gl gm c o wpn²uqm o gl ic|fcu^aik o wpn²tc
uj cugo x^ancm²|pcn0 C| Gi {gu²Ä²f mco qndcp
³u|gj cuqpn²jcvcæpwn lqdd fqiw n xqiv c| go/
dgtngpgn0 O gi xqiv c| krctk o wpn²uqncm c| c
pci { gn p{g. jqi { c o q/i^auk u|cdcfu^ai wncv
ugo ok pgo nqt²vq|w0 J c gi {gu xk²ngngp uci/
p^aiv c o wpnc. Æ { o^auhg² rt²»d^am²|jcwcm ejqn
gugvgi dk qp{qu hngpf Ä²u o wcvn²|qw0 Mpc/
f^adcp gtt n u|» ugo rjgv. o gtv c| krctk Mpcfc.
c MrgvMpcfc eucm u| m vgtÄ²vg u|qt²Ä²kn
²u c rgi nku²gdd ic|fcu^aik x^an^aiqv c| gi²u| n²Ä²/
|gv o gi²t|k c o q/i^auk u|cdcfu^ai ³po ci^a»n
nqt²vq|»fkn0

Gi { xcp. gl gp pgo rjgv Ä²gi²Ä²Ä² C Mrgv
²u P {wi cv pci { gngp²v²gk² i qpf qm²|wco cmqt.
co knqt Ä²tc tlcw Ä²ngo c| gzrtgu²|gp. co gn/
pci { i{qtucu^aiicn xkw ngtgu²vÄ²n n²v per ²u n²v
²llgn c jcwcm cu Qpwct²p0 Dk qp{ c xk²m o^at
wpcm cu^a x^ark² rlc c| go dgt qn{cp uqnu|qt

nʃvlc0 O kpfki hgp{ 2u hgp{ . eucm p2jc vt/
nʃnkn xcrcok o^au |³/f u| ʃp gddg c jcpivrcdc.
c| wʃp nku xcceunʃm c nʃ4gr2p crt» u| ki gvgm
co gn{ gml n Àtc nkfwilc c hgl2v c hgp{ 0 J cwn/
o cu u| knʃm u| kpʃp pgo wʃpcm o^at Àu^ai qu
cfpk kwqw crt» nku xʃgu2u c|. co gn{ c| go dgt
hcvʃ| k^la vo²i rg wʃlc nʃ4pk0

C| go dgtk mwnÀ^apcm c jk^ap{c dkqp{ o gi/
hgm/k c| go dgt rgmʃv0 Eucm jcfu| cv. xcf^au| cv
xcp glgp c u| knʃu xkf2ngp. xci { rgi hrgdd hc/
nkgtogrʃu. gugvgi d^ap{c/x^amcmu|^au. co k c| qp/
dcp pgo o q| i cv o gi uqm go dgtv 2u ʃ| { c xqpev/
dcp. jc nk^Àpm c nkʃw» demupte. pci { qp/pc/
i { qp gi { gf Àⁿ2t| ko ci^avc| go dgt0

Ncuup/rcuup ng| f dgp2r gugf pk c xkf2m
co kpv c pci { vxcem hgrʃ 2tng| Àpm c| ki c| k
kpfk^ap tqo cpvkc cpp{ku| qt o gi 2pgngiv vgtÀrg/
vʃtg0 Qn{cp pci { x^atqu. co gn{ cnʃt eucm gi {
rkncpvc ku o gi hqi p^a 2tf gmf2u Àpngv. dkqp{
pgo cnf. À { jqi { co knʃt Vqtqp»dc 2tng| Àpm
o kpf gpnkpgm c| c| 2t|2ug. x2ig xcp c xcfqppcm
x2itg dgpp xci { wpm c mwnÀtc ngm u nʃ4gr2p0 G|
c x^atqu ki c|^ap c mwnÀ^arcvcp^ai u| 2rʃp go gmgfkn0

Vqtqp» o^at ki c| k co gtnck x^atqu0 Pci { . jc/
vrcu hgrj ncteqn»men u| 2rgu wee^amen pci {/
u| gt nʃ4rgngf2uugn co kv o^at c nʃ4gngx Gi { g/
u^Àn/f mco qm»n cpwv gr0 ©| rgvk pgi { gf g gi 2u| gp
qn{cp. o kpv c nkugdd xkf2nk co gtnck x^atquqnʃ0
U| 2rgugp vgtÀn gn nku co gtnck eucnʃfk j^a| cm hq/
icfpcm o kpfgpÀw0 C vqtqp»kcm c rgi d^Àu| nʃ4ddgm
c| gi { gvgo Àntg0 O²i gi { knʃo^aukm nkllgdd hgnx
nʃ42r Àrgv ku ncrqw xcrcok gw»rc k u| ʃpv. j ku| gp
o²i ku eucm pkpeu o gu| g O qpvgen 2u nʃ4grdgp
xcp c hcpck Mcpcf0 Mcpk pgo vgw xcrcok dc/
t^au^ai qu jcv^auv. rgfki nrcpcfck hqi cm cm u| gkpv
korqp^an» o 2tgvgk xcpcm wʃp c| 2tv. o gtv 2rrgp

gugw c| gu ²u Qpvtkq vx^atc. co gn(pgm u| ²r^p
 go gmgf km t^aAv c n³40 C x^atqupcm g| c t²u| g m⁴
 n³4dgp qn|cp. o kv xcrco k vpi gtk n³4w. g| gi {/
^ancf^adcp urgek^aku n³4pcfck w³kmw. eucm kw xcp/
 pcm vpi gtk n³4w m c u|^atc| h³4f ngm u n³4 gr²p0
 C| co gtn³ck v³ej p³nc kw ku d^ao w³vqu n³4pegre³/
 xcn r³r h³g³0 C pci { vx^acn³v eucvtp^ax^acn n³4km
³4u| g ²u j c c| Gt³g/v³ ²u c| Qpvtkq/v³ n³4 vk vt³
 ngv^a w^ai l^am j cv³cu eucvtp^ax^acn Ai { Fgtqk.
 Engx³cpf. Euk³i » ²u c| gi ²u| x³f²m n³4 x³g³v³
 x³kwcv h³qi n³4rpk Vqtq³p. Oq³vtg³mp ngtg³/
 v³nc vpi gtj g| 0

—i { r³u| km pgo eucm p³ngo pgo xcrco k d^av
 u^ai qu Vqtq³p. jcpgo c o ci {ctqm ku k³n³dd c
 n³4p²n³p jgn|g| ngf v³m gr³0 —i { dg³u²rk³m jqi { ng/
 x²u c o w³nc. c| cpi qn o w³n³u^ai h³n²ng³{ c dg/
 x^apfq³ntc. c o ci {ctqm pgo ki gp w³vcm ²tx²/
 p{gu³Apk³ Co kn³qt c| wee^anev l^atvco. o k³f ki
 hi {gn³o c| go dgtg³ng³0 Vqtq³p» xq³w c| gi {g³v³p
 x^atqu cj qn o ci {ct u| » gi {g³v³p gi {u|gt ugo
 Av³4w o gi c h³Argo g³0 J co ctqucp ²tv³u³ngo t³»c.
 jqi { c|²tv xcp kw gi {p²j^ap{ o ci {ct. ³4x³gpv n
 p{q³rexc³ euc³fki u^ao f³l^am c dg³xcv³wcm fg
 o ci {ct ²ng³ o²i pgo cr³m³w n³0 M³gu| I²|c jg/
 i gf o x²u| ²u Y k³v³tu. c J qgtu³v³cr³qm t³k³qt³v³t³
^am c| k³v³gn³ki g³pe³ ²r³p0 K³o gt³v³dd t²i k n³4pcf^au³m
 o²i < Qfqt N^au| n³ o cu| v³nu \ k³jt³>n Dqfqt
 N^au| n³ ew³t^au|. Rcv³nk H³tg³pe o cu| v³nu. Dgp³/
 fgm H³tg³pe j³xcv³qm Dgt^av³ L^apqu k³ctqu.
 Lcn³d O³lj^an³ cu| v³nu. U|cd» U| k³x³gu| vt ew³
 t^au|. D³fku Cp³cn ²u o^au³q³n³0 Xc³ppcm o ci^a/
 p{qu o ci {ctqm ku. cn³km c j³Avi {^atcn³dcp ²u
 gi {gu o^au. k³ctk o jgn|g³ndgp fqi q| p³cn³0 O clf/
 pgo xcrco g³p{kgp c| q³dcp eucm ^av o g³g³k^a n³u/
 o^aupcm v³gn³km Vqtq³p»v. cj q³ppcp cm³en³o cf^ap
 g³kn³ppcn³0

J c o^at o ci {ct nq»pk^at»n dgu²n[~]pm o gi
 ngm go n[~]gpk c| v ku. j qi { Vqtqp»w»n²u| cntc. c|
 Qpvtk»/» o gmgw xcp *Qui cxc* krctk egpwtwo. c
 n[~]v xcui {^atdcp. c| cw»/ ²u c r r[~]ji {^atdcp n[~]4[~]Än/
 dgn[~]Än p{qrexcp/u^a| o ci {ct v r[~]iv ngp{gtgv0 Kl[~]Ä
 Mctpck MD K[~]va^ap gn o w p[~]n[~]u²u ngtgungf n[~]4[~]Än/
 dgn[~]Än c rgi vnk[~]v[~]n{gugdd o ci {ct. pgnk xcp k^a/
 p{«» u| gtgr g kf gu| cnef vj qph[~]v[~] tuckpmn[~]4[~]3/4[~]0

O²i xercok n pgo u| edcf o gi hgrgf ng| pl0
Vqtqp»dc l[~]ppgm c/qm cnkn pgo wfvcm dglwpk
c/ Gi {gu[~]Än/fmco qmld ²u M[~]pcf^av eucm Äi { vg/
 nk[~]vk[~]m o k[~]v[~] ^avo gpgk^a n[~]qo^au0 Gi {kf gli rvgvrg/
 r gf pgm o gi kuo g[~]km c xku| qp{qnev²u c| w[~]p Pk/
 i c^ap ngtgu| v[~]Än cj qx^a kppgp cw»dwu| l^atcvqm
 xku| pgm^av cnetpcm u| 3/4[~]pk c| «²tg[~]v h[~]4[~]f l²tg0
 Dk qp{. xcrlwn o gi u| k[~]v[~]p. *xcm»u^ai qu k[~]v[~]/o²/*
p{gm xcppcm gttg c e²nc. xku| qp^v c| qpdc^c r t»/
 d^amq|^auqm tgpfgugp n[~]v[~]ctecn x²i| fpgn0 J c
 o²i^av ngtÄppgm ku. c| co g[~]tk[~]ck j cw[~]u^ai qm j co c/
 tqcup rgr r[~]g| km ngv²u c| w[~]p pk[~]peu u|^ao wntc
 rgi {grgo 0 C| ! u| cnto g[~]tk[~]ck Gi {gu[~]Än/fmco qm
 j cw[~]u^ai ck c rgi pci {qdd u| ki qttn²u n[~]4[~]o²rgvrg/
 u²i i gnm[~]Ä f gpgmc| k[~]gp dguwtcpqmgmgp0

Co knqt hgn[~]Ägo c xqpcctc. nku[~]Ä³/₄ c peruw/
 i^at²u euqf^arcvqu u| «[~]pgngv tcnq[~]w c| Qpvtkq v/
 x^atc0 Gw>rck hqi cno cm u| g[~]tk[~]v o ci c c xcu[~]Äv j k/
 j gvgvrg j quu| Ä kf gli o gi { nk c x^atqud»n0 Ncu[~]cp
 o ctef[~]cm gn o 3/4[~]Ä[~]pm c nku. crt» ngtv[~]u j^a| cm
²u uq[~]n[~]ki h[~]wqwwpm c » rctvc o gmgw0 Pci {u| gt
 utepf[~]qv tgpfg[~]vgm dg. cjqn p{^atqp qn{cp pci {
 v[~]o gi gm hÄf gpgm co kt n pgn[~]Äpm u| k[~]v[~]p pgo
 ki gp r[~]g| gv hqi cno w p[~]n0 K[~]v pgo ngm gpi gf²n{ c hÄ/
 f²utg. pk[~]peu u| Än[~]Äi cttc. j qi { mÄ[~]Ä[~]pd³/₄ hÄf /
 x^amc[~]mq| »nj q| o gplpgm c v[~]o gi gn0 J c xcrcnk
 k[~]gpv ngtgu. c| ku cnef gr[~]i. fg tgpfg[~]u| g[~]tk[~]v nk| cl/
 vpcm c euc[~]n[~]fqm c| cw»lwmen dgppg r[~]xgvm| pgm

²u qw. cj qn l»ngukm dgwi tpcmc c x[¶] dg0 Pci {qp ²t/
f gngu n[¶] w^a p{. co kpv c| go dgt x²i ki p²| ²u co gttg
keucm c u| go gr[¶] tj gv. o kpf gp[¶] Aw h[¶] Af | ngv vci[¶] n0
C h[¶] Af ²ngv pci { f go qm^a ek^a lc gl. co gn{ o ci wpm/
hclvc gw»rc kncpcmc hgn² vgp[¶] An ngm jqi { ko r q/
p^a nqp0

C xkf²m m[¶] n[¶] pdgp gttg o^a t gi² u| gp o gi x^a nq/
| qw0 C uqm u| kmc ²u hgp{ w[¶] p l»ngukm c| go dgt/
pgm crt» ngt vngv n[¶] vk0 I {Ao ³teul[¶] m d»npi cypcm
hgr[¶] lg. c| gi² u| xkf²m Af² dd ²u ngf xgugdd. o kpv
gffki xqm0 O gi {Apm ng gt ugp f² rpgm pgo ku euqf c
vj^a v o kpf gl. j cpgo c vto² u| gv ³4³m v⁴ x² p{gk
u| gtkpv[¶] { ngm rppk0

J co knqp. Mngv/Mcpfc c o ci {ct h x^a tquc0

*J co knqp. *0 -0*

Gi { kf gli grv pv gn[¶] Apm c w» v[¶] Antig. o clf nku
go gm[¶] f² u rgtgo² p hqw c xqpcv ²u h² m[¶]4 ccm/
dcp xgw n[¶]4 An dgpp[¶] Apngv *J co knqp.* Mngv/
Mcpfc c ngi pci {qdd o ci {ct vngrg ²u c| kwgpk
o ci {ctu^a i u| gmgo k n[¶]4 rqpvc0 Kw o^a t o ci {ct
j cpi w[¶] v hqicf qw0 Cj qi { ngul^a mco c xqpcv»n
Ucdqreu Hgtgpe ²u *Kax^a phtk* Okm»u o ci {ct rcr/
u| gtngul v m Af x³4 ³4ngm ²u co kpv o ci {ctwn dgu² n/
i gwxg c r^a n{ cwf xctqp ngtgul v[¶] n c| cw»j q| ukv/
v[¶] Apm v⁴ ddp o gi hqtf w[¶] cm w[¶] pwpm gi {km o^a ukm
o ci {ctwn n[¶]4 u| ³4p³4n0

J co knqp pgo qn{cp pci { x^a tq. o kpv Vq/
tqp». fg xcrcj qi {cp uqmcn ngf xgugdd »u kpv/
o gdd0 C hrij nteq[¶] m kw eucm eugeugo m xku| qpv
c x^a tqpcm gi {kn^o a ukm t² u| g c nku p² o gv x^a tq/
uqntc jcuqpn[¶] v. o^a uww gi {² d j cpi w[¶] vqm hqi l^a m
o gi c ngmgv0 C x^a tq n[¶]4 gr² p pci {qp u| ² r v² t.
co gn{ c| w[¶] p j quu| A wee^a x^a p{ A[¶] kn0 O kpf gphgr²

uvñwqu ²r ãngvm c nñ4²r gp ngf xgu rctm ul ³⁄⁴n /
mã0 Xcrj qi {cp c| go dgt t³⁄⁴ v³⁄⁴p qwj qp vcrñlc
o ci^a vdgppg0

J co ctqucp ukm»xcn h³⁄⁴xkvgm c x^atquc jg/
i {²tg ²u c o cicurvt»n vñkpvwãpm cñ0 Mx²u
ngf xgugd ñ w^ap {dcp xqñv t²u go 0 Hgñt n ul kpv
eucm gtf v ñv c| go dgt. u c h^am ño dnqtq^alc
vñcw ul gt²p {gp j ã »fpcm o gi c j^a| kmñ0 C o c/
i {ctqm dãu ññp o gu²n²m j qi { kw c ul ²r uⁱtg ku
cfpcm xcrc0 kv. l^avul »vgtgngv. ul ²r rctñqnev hqi /
pcm ²r ñgpk c l³⁄⁴x dgp o kpf kññdd v³⁄⁴ddgv ²u v³⁄⁴d/
dgv0 J co knqp o^at o c ku c h^am x^atquc ²u c| ku hqi /
o c t c f p k 0

Kv ñ wco c ñgi vkr knwucdd r²r^al^av c ppcm
j qi {cp ul gnj gvk^av o kpf gp vngvwtlc p²mãñ c
xcuãv c x^atqu0 C| co gtnkñk x^atquqm j k vgrgp hgl/
n fvgm ²u pgo uqnev ²tvgm t^a ul cd^añq| p k 0 C hglñ /
f²u c| w³⁄⁴p c| gñv vgtxgngv pci {qp ñgtgu| vñj ã v
ñu ñi { cñwñv nk vkr knwucp co gtnkñk xqp^au c x^atq/
uqm ²ngv²dgp. j qi { c j^a| cm ãi { nñ4ãñqi v^am c
xcuãv ñpñgv. o kpvj c xcrc0 knqt c xcuãv pgo ku c
x^atqu ul ²r p tqdqj qw xqpc gr0 Dk qp { c x^atqu
hglñ f³⁄⁴w lqddtc ²u dertc. vgtlgu| ñgf²u²dgp pgo
v³⁄⁴ f³⁄⁴w ugo o kgr0 J co knqppcm ãi {u »ñ^ap c nñ4
| gr²p xcp c| gi {km r^añ{cwf xct. co knqt c xqpcvq
lgrñ pgn ñdqeñ^av^am c uqtqo r »nev ²u c o q| f qp {
cwqo vknwucp o q| i » j c p i l c c f f k i ul »n co ñi c
xcuãv j c r c f 0 ñi { j c t e p i q | c^av o c i^av c| gi ²u |
x^atqup0

C o ci {ct J co knqp c ñgi t²i kdd qpvtk»dgrk
o ci {ct vgrñ0 O kpf ki hgnul ñk» j gn {g xqñv c| gi ²u |
nñ4p {²npgm ²u o^at pgi {xgp ²xxgn g|gn w ku cñcf/
vcm kv o ci {ctqn0 M³⁄⁴gn xcp c| Gi {guãñ/fñc/
o qñj q|. uqñep^av³⁄⁴vgm kf g. c nñ4p {²ngp f qñi q| /
vcm ²u v²rtg dgngtãngm c x^atqudc0 C|. j qi {
uqñep xcpccm ñvgrñ gf gw o ci {ctqm ku c ppcm

h rgi c| c| qnē. jqi { kv grī nīpp { xqrw j^a| cv
 u| gtg| pk o²tu²ngv^atqp. nīpp { rghk gv²uk t²u| rē/
 vntg xgw²m o gi c| qnev²u j c gi {u| gt o^at o gi
 xcp c j^a|. cmqt v³ddgv pgo o q| qi pcm qn {cp
 nīpp {gp0 C nku dktqm kf gkn³ak ngv0 M⁴Ārdgn^{Ān}
 u^a| o ci {ct eucitf vgrgrfgw kw rē^ancpf»cp.
 g| gpn³Ān rēj gv nī⁴Ārdgn^{Ān} g|gt o ci {ct. cnk kw
 fqni q|km v²rk²g r gfk i dgl³p c xk²nt n xci { nīv
 g|gt o ci {ct0

C| gn w rēi cī^add p²i {u| gtepp {kcp xqncm o kpv
 o quv0 C j^adqt^Ā w³p c o ci {ct vgrgr hēngpf^{Ān}.
 c| w³p 3; 43ô 3; 45/dcp o gi hqi {cnu| vcm c| wqnu»
 gu| vgp² nldgp r gfk i^ancpf» c| go gm²f²u0 C| co g/
 tknek g³nx^areul^vu kf gl²p uqncp l³v³gm ! u| cm/
 Co gtn³d»n gttg c xk²ntg. o gtv c i c| fcu^aik x^an
 ūⁱ qw²tg| vgw²c j cv^au^v. kw r gfk i pci { o w³n³m
 xqncn0 V³ddgm nī⁴3⁴v²r³km c| Gt²g²u Qpvctk²
 vxcem nī⁴3⁴ak nēp^aiku. cj qn o w³ncd²tdgp v³gp³/
 j^Āu| o knk» fqni tv h³gv³gm n³0 co gn {d n dk qp {
 uqncp²ij gv³gn0

Gddgp c|²x²dgp c vgrgr m^Ān³p³vgp pci { hēln /
 f²upgm kpfv³0 C o ci {ctqm pci {qdd^atc c| Gcuw
 qf cm³p. Dgeuj Tqcf qp²u nī⁴p {²nīp rncpcn0
 C Pqtf qf cm³p. c v³rc²v nī⁴Ān xcp³cm c o ci {c/
 tqm xcico kpv c Hgtk gt Utggv³p. Yqqf Utggv³p²u
 nī⁴p {²nīp. c Yg³uv qf cm³p r gfk i c Fw³pf w³p
 Utggv³p²u nī⁴p {²nīp. xcico kpv c u| gi²p {gdd xk/
 f²ngngp jgn {g| ngf vgm g³0 Oclf pgo xcico gpp {k
 k³ctqu. cnkm Mcp³f^apcm o kpf gp v³l^at»n kf g xg/
 kv f vgn0 J co kn³ppcm h rgi c| c xct^a|uc c| c³h³4f /
 o xgugm nī⁴2dgp. jqi { kv³u^a / h³rg hqi rcm³q^auk
 rēj gv ū²i xcp0 M⁴Ārdgn^{Ān} o kpf gp. co k gm³r | gn/
 j gv 0 C o ci {ctqm rēi k³n³dd o kpv pcr u^a o quqm
 fqni q| pcm fg ki gp uqm u| cno w³n³u xcp nī⁴3⁴v³Ān
 cnk³gv pci {qp o gi dgeu³vgm²u cnkm l» j³ip³gxv
 u| gtg| v³mc o ci {ctu^a i pcn0

C *ngi v³/dd* o ci {ct c xci »pi {^atdep. c J cty gu/ vgt ctc^vi²ri {^atdep. c n³/4²ni {^atdep. Y gukpi / j qwug hcto /i²ri {^atdep. o qvt. xkncp{*Ã* go gni dgp. ce²ni {^atdep ²u o^auwv o n³/4 kn0 C xcu^Ãp^an ngi cñ dd j²w|^a| go dgt fqi q| km J co knqp ²u n³/4 / p{²n³p. c ncp^a rku ²r[¶]u²p²n u| kp^vp tgpigvi gp vñ ncm grj gn|g| f²u0 J c gi { t²u| *Ã*n c xkf²ngp. xci { c n³/4 p{²ngp ku xcp. c|²tv kf n³/4 ³/pn³pv o kp/ fki dgxgv fpgm J co knqpd^c ²u g|v vgnkp^vkm n³/4 / rqp^vwnpcn0

3; 47/dgp pgo uqnev fqi q| vcm c ic|fcu^aik x^an^ai kw ku gt ugp ²tgl vgw c jcv^au^av. 3; 48 hgd/ tw³tl^a»n ng| fxc c| qpdcp xcp o^at o wpcn0 C lg/ rpvng| o wpcn^au vgo ²u| gvugp pgo t³/4 v³/p ner o wpcn^av. p²jc dk qp{ gi {/n³v j²ki ku m³dqtqn c ngi u| qo qt^Ãdd c| qpdcp c|. jqi { c v²ngp dgw^vfn» pci {u^ao *Ã* o wpcn^augtgi pgm hrg o clf pgo o kpf ki o wpcn^a p²m^Ãnn f³/4³/4 0

C o ci {ctu^ai o gi u| gtxg|²ug o quv hgn²vgp^Ãn l» ng| gndg ngt^Ãn0 *Mqx^aeu* Hgtgpe vku| vrgv^u ^av³/4v c| Gi {gu^Ãn/f nco qnd»n ²u ng|²dg xgw c o ci {ct/ u^ai k^ap{[¶]u^a0 C vku| vrgv^u kqfcmqo / ²u o x²/ u| gw| gtv go dgt. o ci c pci {u| gt gp hguv. u|²r u| qdtqnev o kp^v|. c hrgu²ig r gfk nkx^an» n³/4v p. *Mqx^aeup²* R^an T»| uc. cnkpgm pci {qp l» p²gxg xcp Gtf²n| dgp. fg qwj qp ku l»n kuo gtn0 C j^a| c c o c/ i {ctqmi {*Ã*rgng| j gn|g0

Co knqt o gi n^aqi cwco. ²rrgp gi { ugtgi o c/ i {ct xqiv p^anc0 Mpcf^adcp c o ci {ct rcrqncm pkpeu xcnc k n³p{gn³gu fqi wn0 Pgo eucm c ngmkn^a ngn ngm v³/4 fpk^Ãm jcpgo c ic|fcu^aik u| gtxg|²uk o wpcn^arcvnev ku pgnkm ngm gn^avpkqn0 C n³v o c/ i {ct u| gtngul v xgn gi {*Ã*w c vku| vrgvugm j gn|g| km gno wpcn^akdc c| kf g²xgf vo ci {ctqnev

Pci {qp u|²r j gn|gp rncpcm euwrc ngtvgm

x²u²j g| 0 Gru uqtdcp vgo r rno qv cnetvem u| gtg| pk
 o gtv j k| gp g| gp c xk¹i t²u| gp g| c| gi { gwep.
 co gn{ d n o kpf gp o ci { ct v¹tucfcm k o q| i cmo
 nk| gn fj gvkn0 G| v c hgnfcvqv pci { u| gt gp qrfqv
 v¹m o gi. Y guy ctf utggv 4960 u^ao A j^a| cv xgw²m
 o gi. cj qn xcp 3/4| pci { vtgo ²u k| gpp²i { rcm/
 u| qdc0 C vgo gm c. m¹Ar¹pl²ng o q| i cm cm u^ao^atc
 hqvucm c rcmu| qd^andⁿ r gfk i v¹| gv ncfpcm p²/
 i { gv o gpgf²nj^a| pcm vtvqcm hpp ²u c d²t³u| gi
 n¹4¹Andgn¹ hfg| k c ncf^auqncv0 Dk qp{ pkpeugp c
 evgo r rno i/qp vqtqp{. gi { u| gt xk¹ c| gi²u|. fg
 pgo o wu^al c m¹An u²i gndgp ku j cpi uAn{ q| pk c
 r¹p{ gi gv0 Pci { qp u²r v¹tgp hgm| km u| go dg xgrg
 i { 3/4p{ 3/4 rctm co knqt o wrcu^aiqv vtvpcm c
 ngtv¹Am vrg xcp rcor¹ppcn ²u j c uqm c xgp²i.
 A¹ { dk qp{ c rctndc ku u| qtwpcn0

P go u| edcf c| qp o gi Av fpk j qi { c vgo r rno
²u c o wrcu^ai gi { Aw xcp. j k| gp o qpfqwm o^at.
 j qi { c v¹tucfcm k o q| i cm cm eucm c| gi { j^a|
 t²x²p hto^anfpcm o gi0 C| gi { km vgo gv vgo r/
 rno pcm u| gpvgn²m hgn kv eucm kvgpvku| vrgv xcp.
 c v¹/ddk j gn{ k²i gndgp c| qpdep c o ci { ct gi { rgv
 u c o ci { ct v¹tuc^aiqm vtl^am c| 3/4u| gl³kgvngk/
 ngv. u vdk qp{ kvku o wrcpcn0

! tfgngu. j qi { c nrcpcfck j cv^au^aiqm pci { qp
 o gi dgeu¹km c o ci { ctu^ai u| gtxg| ngf²u²v0 Co knqt
 c vgo r rno qv h³u| gpvgn²m o ci c c rqi^ato guvt
 ku o gi lrgpv. pci { qp u²r dgu²fgv o qpfqw. j cpi/
 uAn{ q| v. j qi { c o ci { ctqm mn¹Ar^adep h¹4¹vg^anc/
 pcm c v¹/ddk dgx^apfqtⁿpcm wi { cp¹| { p{ kvvq/
 | qw c rtgudkgt¹pwu gi { rgv nkn¹Ar³4¹vg ku0 Hqvqu/
 pcm vrfⁿm c o ci { ctu^ai v¹o 3/4¹Ar¹u²v ²u c| v hgl/
 vgi gw²m j qi { ²rrgp c| kn{ gp u| gtxg| ngf²ugm t²/
 x²p ngt¹An n¹4¹grgdd gi { o^auj q| c v¹4| u³4¹u rnuu/
 u^ai ²u c dgx^apfqtⁿ0

C nku J co knqdpdp ²rrgp gr¹i vgo r rno xcp.

c o ci {ct tgh^{to} a wu vgo r^{no} c u^a/gi {gf km
 k^{ngpj} a/c M^{pcf} a p^{cm} g^{ddgp} c nku x^a t^{qu} d^{cp0} Oc
 o^a t o l^{pf} gp o^a u^{qf} km x^c t^{per} x^{cp} k^{ngp} v^{ku} v^{rgv}.
 co gn{gp j w^u qp^{3/4} p^o 3/4 x^{gpgp} l^{grppgm} o gi 0 C|
 k^{ngp} v^{ku} v^{rgvngv} o^a t |g^{pgu} »x^{cn} ku n^u t^j g^{vk} m
 o g^{tv} gi { c^{pi} qⁿ j^{3/4} i { |q^{pi} q^t a^v c^f q^o a^p {q| q^w c
 o ci {ct q^{ncn0}

C o ci {ct q^{ncm} gi {km n^{gi} h^{dd} d^{clwm} c|. j^{qi} {
 p^{go} w^f p^{cm} c^{pi} q^{mn} 2^u ¶ { p^{gi} g^l gp j^{gn} {g| n^{gf} j^{gv}/
 p^{gm} gⁿ⁰ P {wⁱ c^v M^{pcf} a d^{cp}. c^j q^x a x^{cn} »u^a i i cⁿ e^{uc}/
 nⁱ c^v a^m c| go d^{gt} g^{ngv}. p^{go} c^{pp} {k^c j^k p {| k^m c|
 c^{pi} qⁿ p {g^{rk}. o l^{pv} k^w M^{ngv} M^{pcf} a d^{cp}. c^j qⁿ c|
 k^f gⁱ g^{pv} w^w c^{lf} q^{pn} r^r g^p A^r f^{3/4} kⁿ⁰ M^{qx} a^{eu} v^{ku} v^{rgv}/
 v^{gu} A^t 2^{rr} g^p g^l 2^{tv} g^{nu} f^{qi} a^{pcm} v^{ctv} q^{wc}. j^{qi} {
 c^{pi} qⁿ k^{unq} v^t g^{tpf} g^l /gp dg c o ci {ct q^m u^a o^a t^{c0}
 C [0 O0 E0 C0 u| g^{txg} | g^v p d^{gn} Aⁿ o gi e^{uk} a^m c|
 k^{unq} v. c^j qⁿ K^w a^{phk} u| g^{tnu} v 2^u V^{qo} U^{cy} {gt
 w^{tem} v^{cp} ¶ c^{pcm} c^{pi} q^{mw0} O^a t g^{ff} kⁱ r² i^a u g^{tg} f/
 o² p {g^{ngv} 2^{tv} g^m gⁿ⁰ C v^{phn} {co g^{rl} 2^p e^{um} j^w/
 u| q^p 3/4² p v^{cpw} a^m j^{co} c^t q^{ucp} j^{cto} k^{pe} 3/4^t g go gⁿ/
 n^{gf} g^w c v^{cpw} a^m u^a o^{c0} J c o c o gi 2^{tn} g^l k^m gi {
 o vⁿ u. j^q p^{cr} o^a t l^{gr} p^{vng} l^{km} ku v^{cpw} p^{k0} G
 v^{rl} g^{ugp} co g^{tk} n^{ek} t^{gp} f^u | g^t. co gⁿ {g^v c v^{ku} v^{rgp} f^a
 a^t Co g^{tk} nⁱ d^{cp} v^{cpw} gⁿ 2^u k^w M^{pcf} a d^{cp} x^g | g/
 v^w d^{g0}

V^{gto} 2^u | g^v g^{ugp} t^{gp} f^g | p^{gm} 3/4^u | g^l 3/4^x g^v g^{ngv}. o w
 r^w i^{qnev}. u v x^{cp} nⁱ 4^o x^{gn} f² u^k v^t u^c i^f i ku
 co gn{p^{gm} e² r^{lc} c o ci {ct |g^{pg} 2^u r^{kg} t^{cv} A^c a^r q/
 nⁱ u^{c0} G^{ppgm} x^g | g^v 2^u t^g c v^{ku} v^{rgv} u^c u^l q^p { x^a nⁱ
 r^{em} | q^w c^{nk} o l^{pv} nⁱ 4^v p . g^{ttg} c n^{gi} c^{mem} c/
 u^{cd} 0 X^{cp} p gi {r^{gv} ku co gn{ m^{Ar} 4^{3/4} u^{gp} c| a^{tx} a/
 n^{ev} u^{gi} ¶ k 2^u d^g v^{gi} g^{ngv} nⁱ v^{qi} c^v. g^l v c v^{gx} 2^{ngp} {u²/
 i^{gv} c l³ x d^{gp} o² i l^q d^{dep} n^k c^{net} l^a m o² n {¶ g^p k0
 Co g^{tk} nⁱ d^{cp} c u^r q^t v^{cm} p^{ci} { 3/4^u | g^v c^t » g^{tlg} x^{cp0}
 G^v ku 2^{tv} 2^{ng} u[¶] g^{pk} nⁱ x^a p^l a^m c o ci {ct u| g^{txg} | g^{ng}
 f² u nⁱ 4^{Ar0}

P {^atqp. co knqt o²i xcp o wpnc. plpeu ku
 ugo o k dcl. v²ngp c|qpdcp tggwpgvgu r¹vpk c o wpnc
 p²m¹rk r¹|gpi . u|gtgpeu²vrgp o ci {ctqnev O quv
 qn{cuo kdgp v³/4km c hgl¹Angv. co k gugvgi g|v c pc/
 i/{qp pgj²| rtqdr¹o^av o gi qrfcp^a0 C/ ^an¹uacrp
 o ci {ctqnev j^a|krctk o wpr¹tc u|gtgp²m hqi pk0
 Mku. crt» pkr rgnvy pci {qp n¹pp{gp rgi gv²t²v²ng/
 u¹|gpk c| Gi {gu¹Aw/fmco qndcp0 Dg cnetp^apcm
 tgpfg|pk gi { o jgn{v. cjqn c|w^ap c| ^an¹up²m¹rk
 go dgtgm o kpfki grj gn{g| f²uv vcr¹ip^apcm²u kv
 o kpf gpnk cpp{kv ngtgupg. jqi { rgi cr¹dd c vgrk
 p{qo qt»n o gi xqipc n¹p²rxg0 Vgto²u|gvgup
 gppgm pci { cnef^an{ck xcppcm ¹Angvki ngm o gi/
 u|gtxg|pk xku|qpv xli {^a|pk ngm ctte ku. pgj qi { c
 u|gi²p{ go dgt nk¹u^ano^ap{qr¹u^atc xgl guugp. fg
 vcr¹p o clf wfpcmxcrco kgtgf o²p{tg lwpl0

C o ci {ct nqn»pk vgo²u|gvgup pci {qp pci {0
 C| kuo gtvgdd go dgtgm Dwk L»|ugh »u euc¹flc. cnk
 ngtgungf²uugn hqi ncmu|kn²u o^at j¹Äu|²x »c xcp
 kw0 O»t² Hgtgpe wi {cpln{gp t²i k nēpcf^au²u u|kp/
 v²p ngtgungf . Mtcn L»|ugh j¹Äu|²x gn w l³/4w Fw/
 pcdqif^ap{j »n c o ci {ctqm gi {gu¹Ang²vpgm gnp³/ng.
 u|²r j^a|c xcp. u|gtu|^ao n²u|¹v . ucl^av o jgn{²dgp
 fqni q|kn0 Octv¹p Octv²p{k Gf g ctcp{h¹Äx». j¹Äu|/
 jwu|qp³/4²x »c xcp nkpv²u uqnev u|gtgr gn. o kpv
 vqm^aeu c o ci {ctqm²u nēpcfck jcw^au¹iqm n¹/4³/40
 Vgnkp²n{gu go dgt P²o gj L»|ugh c o ci {ct gi {/
 rgv xqiv gnp³/ng. Mcvppc. V»j L^apqu. P^avtqp L»|ugh
 Uqnc L^apqu. Hqin L»|ugh Rtkpe L^apqu gn o wpr¹u0
 cnkpgm ng|g crw uqm o ci {ct fqni q|kn0 Rtkpe
 U^apfqt. cnkpgm dqtd²n{¹Angv xcp. Dcnqij L»|ugh
 Uctnc N^au|n». O²tgk Kvx^ap vqm^aeu0 Oqrp^at L»/
 |ugh dwnu|xlpcck o ci {ct0 Gi {^an¹cr¹dcp uqm dwnu/
 xlpcck o ci {ct xgv f³/4w gttg c xkf²ntg0 Gi²u|gp
 cpiqn ¹Angvdp jgn{g|ngfgw gn Fcnu Fglu . cnk
 U|gigt n ngt¹Aw nk²u gi { jqncpfk korqtve²i g

xcp. v̄dd u^a|g|gt fqn̄t 2tv̄m hqti cm̄ cv euk^an
2xgpyg0

O kxgn J co knqp Mgrv/Mcpcf^apcm o ci {ct h /
x^atquc. pgo o ctfj cv gn o ci {ct rcr p²m^ān ugo 0
O gi crrr q̄qw^am c Mcpcfck Oci {ct P²ru/cxev.
co gn̄ c|qpdep^ampf»cp jctedcp^am c y kppk gi k
o ci {ct Āu^ai i cn c ngrv 2u p{wi cv pci { gngp/
v̄vgk 2rg| fvgm nk gddgp c xku^an{dcp0 C rcr n̄4Ān
hqñ|vpp |cxctqm xppcm ogtv p̄p̄eu gt u 2u nq/
o qñ n̄|dgp0 Co knqt qw l^atco. 2rrgp gi { h̄cven
v̄k gpp{qregu|vppf u i {gtgm u|gtngu|vgwg. cnk o²i
c| kunq̄ kv ugo x²i g|vg gn 2u eum co Āi { l̄m̄n̄||gn
k^ap{q̄wc c n̄pcfck o ci {ctu^ai uqtu^av0 M̄v nq/
o qñ go dgt xcp qw. Kax^ap/hk O km̄u 2u U|cdqreu
Hgtgpe0 O kpf ngw u|gtngu|vgwg ku o^at c rcrqv. fg
c wrcf qpqucn k̄ n̄4 3/pn̄pv 3/4u|g|3/4f Āngn0 C|
gi 2u| n̄pcfck o ci {ctu^ai 2tfngng xqpc c|. jqi {
g|gp c h̄pvqu rqpvp n̄o qñ 2u dgeuĀngvu o ci {ct
Āu^ai jcteqrlqp c o ci {ct 2tfngn̄t v0 C|»x o^at
Mqx^aeu vku|vgrvgupgm xcp o ci {ct jgwkr lc. co gn̄
gi {gu ekmgngv cpi qm̄n ku n̄4 3/n̄ jqi { c v̄4|u³/4u)
rn̄qu^ai lph̄to^arc n̄i {gp c dgx^apfqtqv o ci {c/
tqm̄gm̄a rcr qv̄t»nku0

C Pki etc ku uqm o ci {ctpcm cf o gi 2ij gv²uv

*Pki rtct Hcm. *ð ð*

Mcpcf c 2u Co gtkne qixcf 3/4u|g|g|gp c v̄tĀ/
ngvp0 Gppgm jcv̄uc cn̄n gi { rkn̄pcvki ugo n̄j gv
u|cdf w̄pk | u|cnj qp^adcp o kpf gpĀw ngx²u c|
go dgt. kw r g f ki p{Ā|u³4 c| go dgtj cf0 Cw»m
cw»dwu|qm gi {o^au j^av̄p. c| go dgt n̄m̄v o gi /
nr lc c| 2rgvpm c| c h̄rh̄n̄u|qw k̄i cm̄ c. co gn̄
c| Gi {guĀw/f m̄co qn̄pcm c m̄n̄4/p̄gi gu ucl^aquu^a/

i^av n³4eu³/p|k0 C x²i vgrgp pci { dktqfcmqo dep. c
pci { rtcklgnrgp. c jcv³tvrcp tgpej gm n³4³4w xc/
rejqi {cp o kpfki gi|qvknwu wc|»pcm i qpfqrlwm
o ci w³nev. o quv r gfk i gthqi c| c| kf gi gu²i. o gtv
c| —lxk^ai pgo uqⁿ t^c nk^a tlc euqf^a k0

Mqx^a eu Hgtgpe vku|vgrgvu Atcn AnAm c|
cw»dc. co gn{pgm nqto^a p^a p^an Rerr Clpft^a u t²i k
ncpcf^a u An0 C vku|vgrgvu At Y gmcpf dep c o c/
i {ctqmpcm cpi qn ngen² v^a f² u c P kci ctc o gmw
o ci {ct kuvpku|vgrgvv vctv. gpi go r gfk i o ci^a/
xcnxkv² tf gngu Am^a tc0

J c J co knqp c lf^a m x^a tquc. Ai { gl c| gi² u|
n³4p{² m Mcpcf c xk^a i qungtvlg0 Co kv nkhg² tq/
dqi wpm c x^a tqud»n ngfxgu xk^a i qmen² ngu ngt/
veun² m Af x³4³4ngn0 C j^a |cm rucp rucp gm c/
tcfq| vcm² u g² pm v^a twi i {³p{³4 r qo r^a l^a dep c
vto² u| gv0 lqddt»n dcitc pci {u| gt gp^a r qiv i {A
o³4eu³4³4n0 C m cl^a m dctcent^a m eugtgu| p{g. u| n/
xgp{k² n0 C pcrui^a t n³4pp{ ctc p{r qtv j kvgw
t^a lwm o kvj c xcrc k euqf c dktqfcmqo dep l^a t/
p^a pn0 P² j c hgn³4w c hgl² v gi {/gi { l»n^a r qiv
j^a | ceunc. p{ctcn»h² rg. o kpf gp Appgp c0 l»r² v. c|.
³4³4 mceci qw t^a pn0 P kv eu o^a t c| c| gi {j cpi A
u^a i. co gn{ P {wi cv Mcpcf^a dep uqmu| qt u| kv,)
n³4² tvkvu. pgo u| cnf wpm cnf^a n³ p² mAn gi {gpgu
k^a p{d² cp. j cpgo c| Av u| gu² n{gugp ncp{ctqi. kv
gi { dktqmv. qw xcrc k i qhr^a n³ v. o gi kv o^a uww
tgpf u| gt vgrp An² r² gw j^a | euqr qtqv ngt An o gi 0
Gffki j^k p{|qw c| go dgt nqtki^a n» ng| g c vgt/
o² u| gv gi {³pvgv o wpm l^a p. o quv o^a t o kpf gp Av
c| go dgt kvx² ncp{u² i gl gt lgrn0

L>fctcdqp gi {Aw hww xgnAm c pci { hpu² m
t^a pm o gtf u² rg0 O kvj c c vto² u| gv euqf^a r vqu
n³4pck hcr nppg. co gn{ jcv³ tv u| cd gppgm c xk/
n³ i pcm co gn{gp ngtgu| vAn hwwpn0 C hcn f Aucp
|³4f gn lf mnen xcp nk^a tp^a | xc² u pgj gl gp rj gv

gmʔr|grpk jqi{ c vɣgl²p vgt[˜]Ān gn c jcvcm cu
 vɣpi gt/vxcnpcm gi{kng. c| Gtlg/v⁰ J c gi{u|gt
 o gi u|cnf c hɣp[˜]fm u²rg. Āi{ r|vj cp c| kt[˜]v|cvqu
 x[˜] ʋ⁰ gi ²u gr[˜]pm v plm c xk[˜]i rgi pci{qdd r[˜]v
 x^ap{qu[˜]i c. c P kci ctc x[˜] | vj cvci 00

i u|tg ug xgu| Ām co kpv nku hcnveun[˜]dc ngt[˜]Ā/
 n[˜]Āpn⁰ G| I tko du{. c i{ Āo ³/₄ eun[˜] r qp[˜]0 C uqm i{ Ā/
 o ³/₄ eun[˜] xcrj qi{cp gzrgf[˜]k[˜]rp k n[˜]gm c|²tv crnwn
 gl c| go dgtk n[˜] ³/₄ u[˜]i⁰ Dgv[˜]xgf[˜]v[˜]pm gi{ nku jc/
 tcrpkx[˜]tc c| Āv o gp[˜]v[˜]p n[˜] p^a m[˜] | » kpp/dg. co q/
 n{cp hqi cf[˜] r[˜]rg. fg kpn[˜]dd nk^a pf w[˜] j gn{pgm r[˜]v
 u| km guv d[˜]k vqucp u| » n c | gpg ²u c hcvn[˜] i n[˜] k[˜]g/
 v[˜]rkc o ci c lqi ck⁰

P go o kpf ki u[˜] m^a i qp jcnf wpm jcpgo p² j c
 u| gr[˜]ff rcpn[˜]uqntc m[˜] u| wpm hgn u v c| cw[˜] ku u| w/
 u| qi. co knqt pci{qdd go gm[˜]g² ugn[˜]pgm r[˜]pf Ān[˜]Āpn⁰
 C vɣp o kpf ki gn^a lqn[˜] nk[˜] v[˜] u⁰ Crnwwpm c d xgp
 cf cn[˜] | » v[˜]to ²u| gv. co gn{gv c| go dgtgm c o ci wn
 u^a o^a tc n[˜] o cv[˜] | v[˜]pcn⁰ Pci{ v[˜] xqndcp o gi euk/
 rcp c| Qpvtk[˜] v[˜]x^a pcm xk[˜] g. co gn{gv o^a t c P k/
 i ctc x[˜] | gu² u ku o gi f w[˜] cu| vq[˜]0

P² j^a p{ hcnveun[˜] o ctcf gn o ³/₄ ³/₄ v[˜]pm xci{
 euw^a p j^a | euqrqtqm crki r[˜]gv m[˜] v[˜] p du² i gv vppk⁰
 f v[˜]wwpm gi{ j[˜] q[˜] p² u j k v[˜] r[˜] p o gi tci cf[˜] » n[˜] r
 p{ i ³/₄ k r[˜] hcp[˜] v[˜] k[˜] pnev⁰ Gi{ jcnqo vɣgl² p h[˜]uv k
 n[˜] ³/₄ p{g|gdgp i{³/₄ p{³/₄ vgo r[˜]no. co gn{ c| gi² u|
 xk[˜] ²m h[˜] ³/₄ v[˜] w[˜] cm[˜] f pk r[˜] u| kn⁰ U⁰ Ecvtk[˜] p[˜]gv x^a tqc
 Ā[˜] x³/₄ ³/₄ n[˜] | { dgpp[˜] p[˜] n[˜] v⁰ Qrcu| qu j cv[˜] uc. co gn{dgp
 c o x² u| u| go g uqm u² r u² i gv h[˜] g| j gv h[˜] r⁰ C r[˜]gm[˜]/
 kuo gtgvu w[˜] » u[˜] | » c| qpdc[˜] pgo uqnev ²t| r[˜]gi /
 j gv o gtv o^a t j gi{g|pk n[˜]gm c egtw^a v⁰ K[˜] v xcp c
 y gm[˜] p[˜] k eucv[˜] tpc x² i g. co gn{ c| Gtlg ²u c| Qp/
 v[˜]tk[˜] v[˜]x[˜]nev hqi lc ³/₄ u| gn[˜] ³/₄ p[˜] k⁰ Pci{ h[˜]gn f² upgm
 k[˜] p[˜] w[˜] o clf c| gi² u| n[˜] ³/₄ p{² m co kpv c eucv[˜] tpc
 gm[˜] u| Ān ²u o gi / n[˜] | f j g[˜] k ² r[˜] v[˜] v⁰ O^a t pci{qp x^a t^a m
 g| v c| k[˜] u| cn[˜] v c| k[˜] g[˜] u| cn[˜] f v o ci {ctqm o gtv

xcppcm kw ku grgi gp kf gul cnefv x^a pf qto cf ctem
cnknkwr kj gpvmo gi gi { nku²0

C| kf u^{ti} gv tqj cpwpm vx^a dd0 C| guv ng| f
ngtgul ngf pk c| cw»pm pci { gt hgu| [¶]ugngv vgu|.i
j qi { kf gl² dgp dghwuwpm Y gncpf dc. cj qn o^a t
x^a tpcm t^a pm c vcpwpk x^a i { » o ci { ctqn0 C h³/f gv
o^a t uqm j gn{ [~]Aw hgn² r² v² m n² u| [~]An c nep^a rku0 I g/
tgp^a m xcui| gtng| gvgm v^a o cuu^a m hgn c pci { dg/
x^a i^a uqnev. i ki^a u| k o wpnc gn n² u| [¶]v² u² pgm xc/
i { vpmc vp[~]Aw

C| cw» c uqm n² p{ u| gt ngt[~]An m n² 3/4v dwn²
f^a euqn o clf c uqlh t[~]Apm euq^a m² | xc h² ng| 0 Rerr
d^a v^a pm t² i gp ngt[~]Aw gttg c xkf² ntg. [~]À { luo gtk
o kpvc vgp{ gt² v² u| gl² tv² tv² vj gvgvpp c o qti^a uc<

ô F gj^a vkwo² i pgo t² i gp hqn² » xqm²00

Mgtguu[~]Am c hqn² » v. j co ctqucp o gi ku vcr² rlwn0
Gi { u| gt gp [~]À o gftgv^a ucm pgnk² u o^a uhgr² xg/
| gw² m [¶] { n² k^a plc c eucvqtpe² tfngng² u gl v o kp/
f gpgn² 3/4² j gn{ gl kn0 Gn w[~]Apm c nku^a tcf v o gf gt. c
hqn² co xk² g rfg ki rku| nqucp jcd| km cddep c|
^a i { dcp. co gn{ dg o^a t c| go dgtk cnetev² u gt
j gn{ gl vgo

Pgo t² [~]Apm t^a euq^a m² | pk o^a t o^a uhgr² lc/
lwpn0 Gi { /n² v j^a | d[~]Aw² c n² vj cv² tqp. c hgr² [~]Aw
h³/v) n² 3/4 p² ng pgo pci { qp dca^a u^a i qu0 K² v xcp
Oci { ct² knc. fg pgo pci { qp fqdqi jcv² tvg c
u| [¶] [~]Apm o gtv eum j^a tqo j^a |. pgo hgn f³/v vq/
x^a dd0

U³/v² vgf km co knqt dghwuwpm Y gncpf dc0 C h /
wee^a p x^a i wpm^a v² u c| [~]À ngvgm nkxk^a i [¶] vq² mktc/
n² vck xknppcm hgn0 K² n² dd eum n² 3/4 xqpcrckv n² v
lwm gppgm c o ci { ct u| go r qpv² » n qn{ cp hqvqu
j gn{ pgn0 Gij ci { lwm Eco gnpp^a nqo^a u^a v. 3/4 u| g/
qkcf vcm wi { cpku c jcv² tqm² u o quv o^a t Y gkncpf
c| wcm² » euk² i | cv0 C x³/4³/4 cpi qn vgo r nqo
nigo gm² f km c j qo^a n{ d² » n² u gr² leugngf pgm pgn0

xgrg. j qi { nk^an » o x²u|k qti qp^alc xcp. co k c o k
 u|go r qpwpnd»n c|²tv hqpvu. o gtv c o ci {ct
 kugpvku|vgrvgntg ku kw i { ngm ¾u|g c| go dgtgn0
 J kvgrgp lřng| Āpm 2u gi { Ārgv gn w^amwpm o gi 0
 C dqrv o ¾ ¾w pci { jgn{k²i = gi {gn tg | c o c/
 i {ctqm n¾rqpvc0 Ngu| gl o²i o^aunřrrgp ku0
 C vku|vgrvgu Ā 2rrgp cmuqt cmwfqw o gi hrgn
 qdlgmwo tc0 C j^a|cv. o kp v kw u|qn^auqu. ^avrcnřv
 l^am vgo rmo o^a. cnřf c|w^ap o kpf gplřrg jgn{k²i
 c| Āfx¾u e²mqtc0

O ci {ct u| » hqi cf dgppĀpmv0 O clf pgo o kpf/
 gi {km Ā nk^apf qtn»0 J k²dc nřuvĀpm gn pgo o w/
 rcu|vqvcu ugo o kv ugo 0 C fgt²m go dgtgm gffki ku
 vcpwncn0 P gi |g|gp v¾k c| cñ¾fk fkcrgmwu c pgj²|
 cpi qn u|cxncv. c hgrk²nk o ci {ct 2u c fwp^apv Āk
 ku u|k²lc c dqmpf^api rku p{grk^av. fg pgo uqn^atc
 pgo rgul o^at p²o c gddgp c| k^av|cvqu pci { qt/
 u^ai dcp0 C vku|vgrvgu Ā v¾nřrgvu cpi qn v rg v/
 pwl^am c nkl²v. u c hgrf qw rgenřv o kpf gpnk
 pci {u|gt gp o gi vpwlc. kv tqul fl^am plpeu.
 o gtv 2t|km c u|gi²p{gm j qi { eucm c| cpi qn p{grk/
 xgndqnf qi wj cvpcn0

O^at u³¾²v guv xqrv fg c|²tv cw»p dgu^ai w/
 fqwwm c| gi²u| x^atqu0 C eucvtpc nk^a¾ l²pgm
 nřpvĀlck pgj|g|gp hngvfv gm o quv rctnřq||^am
 u v jgvgnřpv nřv|gt kw o²i c |gpncet ku l^au|km
 dqfqi cp nerlc hgn c o ci {ct c hgl²v. jc o ci {ct
 ðo gn»fl^am v¾p gm pci { p²jc c| 2i hgr²0 Dghqtf w/
 nřpm c nřp{²m wee^akdc0 Kv o^at o kpf gp o^auqf km
 Ārgv o ci {ct. c i {^atncdcp rgfki tgpi gvgi j qphk/
 v^atuwpm fqni q| kn0 C nřokk i {^atcv dĀf¾u i {^at/
 pcm nřtgu|vgn²m gn ki gp uvřnuqucp. fg xcpcm
 gñi gp c nř¾²n. c| ce²n² u c v¾ddk i {^atncdcp ku0
 MĀn³¾u gp c| 7. 8. 9. ∴ 32/km wee^adcp. c Nkpeqrp
 Utggv. J gngo u cxgp. Dwi gt Utggv vgrg gf vgm
 rg c o ci {ctqm fg o^auwku cnřf vcml» p²j^ap{cp0

Gi { o ci { ct go dgt c | | cn ku d^Äu | n^Ämgf j gvkm
 j qi { t^Ärc wee^av p^Ägxg | vgm gr⁰ Xcuu Hgtgpe n^Äh u | ²/
 ngn { pci { qp t²i gp ngt^ÄÄw kf g ²u hcto gt ^ÄÄrgv
 i p { kqw. cj qn o kpf gpl²rg xcu^atw n^Äj gvw ner pl⁰
 C xcu cpi qmⁿ ktqp ²u Xcuu d^av^apm w^ap c | wee^a/
 l^avo kpf gpnk Kqppcmj ^ÄÄlc⁰

C o ci { ctqm xg | gv k c t²i k vgrgr gugm n^ÄÄÄrdg/
 n^ÄÄn r^at u | ^a | eucrf xcp dgn n^ÄÄm fg kpn^add Äcddcp
 l³ppgm kf g c o ci { ctqm⁰ U | gtgr gv l^aw | » o ci { ctqm
 C j o cpp Hgtgpe Dcpm^Ä L^apqu. c Dgtvqj { eucrf.
 Tgrw F^aplgn N²xc { Cpft^au. cnlpgm ^ÄÄgpgi {
 i { gtgng xcp. O guvt L^apqu. Uwdqule Xkmqt dqt/
 ngtgungf . Dqgu^apu | m { o ²u^atqu. O gn^am I wu | ^vx.
 c dnw^ÄÄcn^Äk | gpgnet xg/gv lg. U cd» Nclqu. O qp^at
 \ qn^ap xqiv h j cf pci { . Mw ge | L^apqu ²u vnf^ap n^Äi /
 gnu pgm ngnwv xqpc go n^ÄÄgpggo O clqtqu N^au | n^v.
 cnk pci { qp uqnev l^atcf q | qw c | kvpk o ci { ct^ai
 o gi u | gtxg | ²ug n^ÄÄÄÄn ²u ugi ^ÄÄgw Mqx^aeu ^ÄÄu | vrgv
 ktpcm c | Äw^ÄÄ o wpn^adcp⁰ Euqt^ak U cd» O lj^an^Ä
 gtf²n^Äk p { qo f^au | o kpf ki ³p | gvrgp^ÄÄn l^atcf q | qw c
 o ci { ctqmgnj gn | g | ²ug n^ÄÄÄÄn⁰

J c Äi { pci { qp w^apc p² | Äpm xcp kw xci {
 n^Äv | gt o ci { ct ²u gi { p²j^ap { o ci { ct gi { rgv.
 co gn { gndgp grⁱ u | ²r ²rgv dw | qi⁰ O²i hwdcm/
 mwdlwm ku xcp c o ci { ctqmpcm co gn { pgm qn { cp
 pci { ukngtk xqncm j qi { c | cpi qmⁿ ku j q | ^alwm
 eucvⁿÄnq | vcn⁰ Ngi cif dd p { qreul^a | . g | gt o ci { ct
 nevⁿÄn^Äwu n^Äj gv gttgher[?]. g | gmpgm c o gi u | gtxg | ²ug
²u hgm^ÄÄtqn^auc pgo eucm xcn^auk j cpgo o ci { ct
 u | go rqpvdⁿ ku pci { qp u | Änu^ai gu xqpc⁰ C n^Äg | f /
 r²r²ugngvo^at o gi ku vgw²m²j dgp c | k^ap { dcp⁰

Xceut^atc x^atvc m c P kci t^ap^ar⁰ Rerr d^a/
 v^apm j^a | c ²rrgp c x^Ä | gu²u l³Ä³Äw xcp. o^at vnf^ap
 gn ku n^Äu | Äw c l^ÄÄ^ÄÄng gppkcn^Ä ²u o k o²i dk qp {
 pci { qp o gu | g xqmwpm c e²n^Är⁰ O gi uctnepv^ÄÄ /
 wm vj^av c | cw^Äv²u pgnk x^ai wpm c nqtqo hngv

²lu|cn¹pcn⁰ X²i vgrgp h³/f gm n³/4 ³/4v j Æ wpm gn
eucm pci {p²j c eukncpv hgn c⁰ i²r tghngmqt/u|go g
²u cj qn rgrgr|vg c⁰ hngvgu²i gv qw c| c¹k» vgt/
o²u|gvhqi cf qw⁰

C vku|vgrvgu Æt gi {u|gt eucm c pci { v¹xqndc
o wcvqw<

ô Qwxcp c P kci ctc#ô o qpf qwc⁰

C u³/4² w²i tg o kpyj c xk¹i «¹» hgnj Ænv xqpc
t^a ²ui {³/pi² p xkdt^a nc n¹ vj cv¹ t u¹ ²r²p⁰

Pgo n²uvgm uqn¹ki c hgrk¹i qu¹uuc¹ P crrcn
c pcr h²p{g l^a u|kn c rgl vj cp» x¹ v³/o gi ³/4u|gv³/4v
hgn¹a m» eugr rlgkxgn ²llgn rglki c tghngmqtqm xc/
n¹» xk¹i c jgn¹gwgu¹k c v¹ gu ²i kguv⁰ Gi { pcr
jgn¹gw u¹ti^a k x³/4³/4u |³/4f ²u nk wflc o²i j^ap{
u|¹p pcrqv rtqf w¹n¹v_ c vgej plnc. co gn¹gnpgm
o kpf o gi xcp c o ci c u|kx^atx^ap{c ²u gl gnp¹gm
gi {kn¹ Æ x³/4 ³/4no kpn¹gv v¹xqnd»r⁰

Oquv o^at o ci co n²tgo c uqlh t¹pn¹gv jqi {
co kn¹gp i {qtucp rgl gv u^ai wflw¹pn⁰ G¹hqi qw c|
k¹i c¹no . jqi { t³/4k¹f gup c xk¹i rgi u|gdd n¹x^ap{c
hqi gn wgo v¹pf³/n¹/4p⁰ C uk¹gw²utg crki xqv
u|¹Am²i. c| cw» c⁰ o gn²n¹/4x²p{gn¹gp kt»|cvqu ug/
dgu²i i gngwg c o²th³/4f gng⁰

Gi {u|gtt¹g eucm cu¹q¹w¹pn⁰ C h²p{gu²i n¹/4
|gn²dgp xqn¹wpm gn²tv¹Am o ci^av c x^atqu⁰ P kci ctc/
hcmu c| co g¹kn¹ck p^au|wcuqm Xgn¹pe²lg ²u gl c|
²r²pm hqi c¹no qp t³/4 v³/p o gi n¹u|kn⁰ C| Æ r¹gv¹m
h²p{gugm o kpf g¹ph² xgp²i n m d^atqm cj qn
wi {cpeucmgn¹ rgl gv n¹/4n¹gpkc fqn¹tqn¹v⁰

Gi { r¹kn¹pc¹tc hgrk¹ncpv c Ftwo o qpf j kn¹/
go n¹no . pci {u|gt m vgo r¹no^a xcn⁰ Pgo eucm c|
co g¹kn¹ckm u^ao^atc xcp v³/4v²pgm k pgxgl gv¹u²i g.
jcpgo o k ku c¹pcm vgn¹kyj gv¹Am j ku|gp gl gp c
vgt¹rgv¹gp kw xqn¹ c| gru o ci {ct k¹vgp¹ku|vgr⁰

O²i o c ku o kpf gp o^a uqf km xcu^a tper kfg i {*Äng/*
ngl pgm³uul g c o ci {ctqn⁰

Xcp p²j^ap{ t²i k nēpcf^a u gl gp c n³4p²ngp⁰
P go cnetwpm ul »pk c j^a | ki c f^a pnt »n Rerr Cpf/
t^a ut »n cnk v³dd o kpv j Äu² x »c xcp gl gp c xk²/
ngp⁰ H ul gt/ ²u eugo gi gngtgungf²ug xcp ²rrgp
cppcm c | Äp^acm c vqtnm^vp^a n cjqn c i {cqi Äv
ngxgl gv c x[¶] gu²uj gl 0 C | Ä²ngv gn w dgp| kpv³4w /
^amqo^a u⁰ K^v ^anēpcm o gi c nk^a pf w »m nēuklck⁰
Vcñ^a p c nēi t² i kdd nēpcf^a u gttghr² I ³pe/k Nclqu
d^a euk cnk pgi {xgp ²xg xcp O c kphggv² ²u Vcdp/
n^a p O k j^a n[¶]. m^a ³pdgp ku c | gi ²u l² n[¶] | ki gv² p tgp/
i gv² i c o ci {ct. fqi q | pcm c xcu^a p^a n u v cnef
p²j^a p{ hcto gt ku⁰ O ci c c P kci ctc ku uqm o ci {ct/
pcm cf ngp{gtg⁰ G | kw c | gt 0 G | jclvc c | gegv/
i^a t. c o v^a i {c/. c pktqi² p/ ²u uqm nkugdd i^a t
i² r gk. cjqn o ci {ct o wñ^a uv o kpf gp Äw vcñ nēpn⁰
M³4 Ändgn Än ul^a | go dgt fqi q | km c i^a tēndēp. c
l² n[¶] | ki gv² p r gf ki nēi cñ dd j^a tqo gl gt c o ci {ct⁰

Ok ku i {cqi x^a i wpm pgnk c | Äp^acm ²u o gtg/
fgngp gtgul ngf Äpm cñ⁰ Gi {ul gttg eucm gn w Äpm c
P kci ctc n² v ngp{ i³4 x[¶] gu²ug. cjqi {cp o^a t
cpp{ku|qt o gi ²pgngn² n⁰ | rrgp c xcñ[¶] » l² p{ ²i gk
²u l³4³4w c | gm c tcf j c v vcp ul kx^a tx^a p{ 0 J c vñ/
o^a dc ngt[¶] v c euqf^a v^a qu ²m² p{ ²u ul² f Äxg j c m/
i c vqo c vku vgrv²gu Ä j cuqpn » cp itc p f k » wu vgt/
x² v. co k eucm kw ul Ängv gv² w o gi 0 C | qto qp ng/
j gv² p o² i vgm² v xgppk ²u qf c nēngp² ²r[¶] vgpk ul²/
ngn{ ul[¶] wudēp o ci {ct n¹ r qp^a v. co k gi {Äv c n o c/
i {ct o Ä gwo ku ngppg⁰ U go r² ngv v³ dñ^a m² u cf c/
vqm j[¶] x^a p^a m hgn c | kf gt^a pf w » co g t k n c k m² u kf gi g/
pgm hki {gm² v c tte c pci { ki c | u^a i v c r p u^a i t c.
co gn {gv c | gl gt² xgu O ci {ctqtul^a i i c n ul go dgp
gm³4 x gwgn⁰ C | ²txgr² u qn {cp o gi f³4 v j gv² vgp
ngppg. j qi { vcñ^a p hgr² pm ku hgrci {qi pc c P kci c/
t^a » n n k p f w » tgo ² p { u² i ul kx^a tx^a p { c⁰⁰

C xceugt^ap^an Ætc qwj qp xci {wⁿ0 Oci {ctqu
²vrgm o ci {ctqu xgpf²i u| gtgv⁰ Oci {ctqnt»n dg/
 u|²n gv^Åpm o ci {ctqnt»n cnkngv kf g^xgvw c uqtu
 u|²rkj ctc0 Gi { p²j^ap{ cf cvqv gmer wco. vcr¹p
²tf go gu o gi lgi {g| p^k0

R^atu|^a | o ci {ct fqi q| km Rqtv Eqndqt^p2^p0
 Kppgp kpf vn nk c i ki^au|k eucvqtpc. co gn{ c n¹v
 vxcv o clf Æi { n¹k ¾u|g. jqi { c jcl»|^au o gi/
 kpf wj cv c| ¾v pci { vcxqp²u n¹4 xgv^{gp} x[¶]k ner/
 euqr^v r¹v^u Æn Eukⁿi ». Ergxgr^{pf}. Fgtqkv²u c
 v¹ddk pci { x^atquqm n¹4 ¾v c v^{gp}i gttg⁰ T²u| k^v
 g| gm c o wⁿ1^rvqm cf pcm t^{gp}i v^{gi} o wⁿecmⁿ/
 o cv. t²u| d^{gp} uqm o ci {ct fqi q| km c| gr^xa vqtqⁿ/
 p^an c i cdqpc tn p²n c p^kmgn¹. c ego g^{pv}i {^at^dcp.
 u|»xcn cj qn eucm n¹g gw²i gu0 Gi {km uo ci {ct v^{rg}/
 r¹ Æn Euqⁿ Nclqu. c o ci {ct gi {rgv g³4ng Nw/
 n¹euk Nclqu. c r²p| v¹tqu. kngxg v^kn¹t R^am I {w^rc0
 O k^{pf}g^{pn}k kuo gtk o²i Mquktct U^o v^{gn}v ku0 J ct/
 o k^{pe}/p^{gi} {x^{gp} euc^rf u| qt^wv kf g. c v¹ddk o ci^a p^{qu}
 go dgt0

Dtc^{pv}qt^f ku p^{gx}g| g^{vu} jgn{ o ci {ct u| go r^{qp}v/
 d»r0 Uqm o ci {ct v²xg^v kf g. cnkm c m¹1¹p¹rg i {^a/
 tⁿclp vcr¹ncm g¹gn{g| f²uv0 C t²i k^{gm} n¹4 Æn c
 n¹g kuo gt^vdd c Dc^r1| u| hco k¹c. Gt^f2ⁿ k O k¹a n¹.
 H¹4f k C^{pv}n Octe| k^o O k¹a n¹ *c o ci {ct gi {rgv gⁿ/
 p³4ng+. J qtx^av²u o^a uqⁿ0 Pci {qp u|²r v¹tuc^fcm k
²rgv h¹gn f³4v nk co gn{tg d¹u| n¹p j k^{cv}u| pcm c
 o ci {ctqⁿ0

Ecr^{gf}q^{pn}k^dcp v[¶]/v^k g^{pn}v o ci {ct euc^rf rⁿkm
 c n¹4p²ngp p²i {/¾v h¹to gt. c o wⁿ1^uqm c o cn/
 o qⁿclp. c i k^ru| i {^at^dcp²u c| ¾v f²d^{gp} n¹gt^gukm
 c r²p| v0 V»j K¹x^ap. U cd» L»| ugh H»pci { f¹t^qp
 x^gu| p^{gm} t²u| v c o ci {ct o q| i cm cⁿclp0 I w^{rr}j
 x^c1¹p^v f²lg u| k^v2^p g^ri o ci {ct^pcm cf o gi²ij g/
 v²uv. p²j^ap{ p²o gv¹ Æn d^gu|²n o ci {ct c M¹1¹g^gt
 *D^gtr^k+²u I c^v p²o gv v^{gn}r g^{ng}p r t»d^an d^qr^fq/

i wpk cj qn lqdd^atc p²o gv v ng f qni q| kn0 Mkej g/
pgtdgp vgrgr gf gw ng *Lwpi gt* I {wrc xqnr r²p| Āi {k
ku| xkugn 0

O kpf gphgr² gnu| »t»f wpm fg gi {/n²v j gn| pgxgv
o²i hgn ngj gv lgi {g| pl0 ~i { *Dtkfi gdwiti qp.* Dwhtcn»/
xcn u| go dgp. co gn| o^at c| Gi {gu²ñ/f nco qnj q|
wtvq| km n²u|^a| /j^atqo u|^a| o ci {ct vcr²nv gi| ku| /
vpeka^av. *Vj qt qpf* r cr²i {^at^adcp ku f qni q| pcn0
C xcu²ko wpr²uqmn²4 r qpvc *UOVgo cu0*

Y kpf uqt F gvtqkwen u| go dgp xcp. Āi { kppgp.
o kpv *Uctpkcd»n* ki {gng| pgm c| ^anco qndc ^aveu²u| k
k| go dgtgm *Y kpf uqt dcp* pci {qp uqm o ci {ct
vgrgr gf gw ng. cnkm pgo ncr pcm dgdqeu^av²uv c|
Wpk»dc. fg c|²tv kppgp l^atpcm c *Hqtf/i* {^atdc f qn/
i q| pl0 *Vgo guk* *Kwx^ap.* Xgto gu ²u O ci {ctk Ā²ngv/
go dgtgm *Rqe| qp* {k²u *Dgwgp* xgpf²i n u²ñm c| kuo gt/
vgddgm *Hqtf/ekv* {dgp. c *Hqtf/i* {^at ncrpcfck vgrgr²p
ku gngi gp f qni q| pcn0

C| ²lu| cnc o^at pci {qp n²u tg l^atv c dgu²n/
i gv²u c| qp dcp eucm pgo u| cnefv h²ndg0 O ci {ct
pgxgm o ci {ct uqtuqm xgv f vgm hgn fg c n²4 gn/
v²xqr dcp o qto qi qw c *Pkci ctc* ²u c pci { | Āi^au
o k²vj c o kpf gpv grp {grv xqrpc. co knqt c| —lxk^ai
o ci^adc | Āf²lc c| go dgtk uqtuqn²v. grgp {²u| pgm c
o k o ci {ctlc²pm c pci { qrkcu| »ngo gpe²dgp ²u c
o k u|^ao wpntc pgo o ctef o^au xku| c. o kpv c|
go r²ng| ²u00

Gi { nku² dclqu rqpqv vppk gppgm c n³p{x/
pgmc x²i²tg0

Hqn{vpp Àcdd²u Àcdd cfvqnev ncrqm Ài {/
jq i { ctte i qpfqncō . jqi { o kpf g| gngv³u| ghqi /
rcmqo²u c| cfvj cm c| v ¶ { n³gi²u ¶igo 0 J k²dc/
xcn» rppp0 G| c| qtu^ai o quv n³u| Ñn²u o²i uqñ ki
pgo n³u| Ñn gr0 J c c| cfvqnev o²i vx^addtc tu
gi { o^autc j^ap{qo . c| | cn c| ^ancñ pqu n³r gp pgo
x^anq| wvj cvqñ0 C tgegrv c| . co k gdd n c n³p{x d n
n³go gm³gfm c t²u| ngv³tf²ugm gn³r Ñpgn0 M³ñ³p/
dgp ku pgo cfjcwco ngtgm gi²u| gv0 Eucm gi { nku
go n³m c| gi²u| 0 O kpf gppgm eucm cpp{k c| ²tvgn g.
jq i { kvj qp n³u^am< o k| gp tgv³gv³u m³ñ fgn gn/
ngn xgw²m nk c t²u| Ñngv c o guu| g²u| cntc uqf qtv
o ci { ctqm gi { o quv n³u| Ñn qtu^ai o gi cncr q|^au^a/
d»r00

C n³pp i {³at f . kf gi gpdgp jcteqn» o ci { ctqn\$
pcm eucm cpp{k< jc xccpm v²xgf²ugm g o wññ/
dcp. p²| |²m gr0 Gi { t³k| wf c|^au cncw pgo n³gi gv
o kpf gpv n³vpk gugv³gi hgn³ngvugp hki { gn ku o gi c|
go dgt xcncō k0 C| c hqpvu. jqi { euqf^ancvu m³ñ /
fgr gkngv o gñgi u| gtgv³gn tgu| ngv l³nggo o gn²u
ci i »f^auucn vgi { Ñn o²i j q| |^a. euqf^ancwn n³ñ²t/
vgo 0

C n³p{xgo x²i²tg c rqpqv o clf c| | ngv vgu 0
Mcpfc v³4v²pgv²dgp o gi ngm gi { u| gt o clf³4³n³ñ/
vppk c o ci { ctqm u| gtgr²v ku0 C| Ñu^ai ¶» pqvu| /
n³p{x²jgp. ô co gn d n g| c n³p{x u| Ñngv³ô
v³4v²pgo kcf cvqmxcpnc00