V@ārÁsekuā&|^Á, ærÁš[,}|[æå^åÁsîhÁžXæ)å^}à[••&@ÉERT|ðrá U}hÁFÎÁRT}^ÁŒF€ OE&&^••Ás^cæa‡ehÁOE&E OE&&^••Ás^cæa‡ehÁOE&E Ú`à|ã@¦ÁVæɛ́|[¦ÁBÁئæ)&ã Qu-{¦{æíŠcåÁÜ^\*ãrcº¦^åÁşiÁÔ}\*|æ)åÁse}åÁræp^•ÁÜ^\*ãrcº¦^åÁp`{à^¦hÁF€ÏGJÍ|ÁÜ^\*ãrcº¦^åÁį~a&∿hÁT[¦cãį^¦ÁP[`•^ÉENIË IFÁT[¦cãį^¦ÁÙd^^cÉES[}å[}ÁC]\*FVÁHRPÉENS



Hc 'Wh''h ]g'5 fh]WY'Xæ) å^} à[••&@ ÉREAT ÉÉET ÉÉET ÉÉET à ÉET à ÉÉET À

Hc``]b\_'hc'h ]g'5 fh]WY. '8 C= 'F€ÈE € € GJÌ | HÎÈ SEF€ÈÈ Ì JFFH IF @ @d H®å¢Ès[ 注 ¦\* BF€ÈE € € BF€GJÌ | HÎÈSEF€ÈÌ JFFH

# ÚŠÒŒÙÒÂÙÔÜUŠŠÁÖUY ÞÁÐUÜÁŒÜVÔÔŠÒ

Ô|→→Á\æã↑bÁá^äÁ´~^ä⇔\⇔~^bÁ~àÁ|bæİÁå\\\*İÐÐ}}}È⇔^à~ã↑á}~ã→äÈ´~↑Ð\æã↑bЁá^äË´~^ä⇔\⇔~^bË~àËá´´æbbÈ\*äà

Űå⇔bÁáã\↔´→æÁ↑á]ÁâæÁ|bæäÁà~ãÁãæbæáã´åÊÁ\æá´å⇔^&Áá^äÁ\*ã⇔{á\æÁb\|ä]Á\*|ã\*~bæbÈÁN^]Áb|âb\á^\⇔á→Á~ãÁ b]b\æ↑á\↔´Áãæ\*ã~ä|´\↔~^ÊÁãæËä⇔b\ã⇔â|\⇔~^ÊÁãæËbæ→ ₩^&ÊÁ→~á^Á~ãÁb|âË→↔´æ^b⇔^&ÊÁb]b\æ↑á\↔´Áb|\*\*→]Á~ãÁ ä⇔b\ã⇔â|\↔~^Á⇔^Áá^]Áà~ã↑Á\~Áá^]~^æÁ⇔bÁæ[\*ãæbb→]Áà~ãâ⇔ääæ^È

򌾁\*|â→vbåæãÁä~æbÁ^~\Á&⇔{æÁá^]Á}áããá^\]Áæ[\*ãæbbÁ~ãÁ⇔f\*→væäÁ~ãÁftá←æÁá^]Áãæ\*ãæbæ^\á\⇔~^Á\åá\Á\åæÁ´~^\æ^\bÁ }↔→ÁâæÁ´~f\*→æ\æÁ~ãÁá´´|ãá\æÁ~ãÁ|\*Á\~Áãá\æÈÁŰåæÁá´´|ãá´]Á⇔>b\ä|´\⇔~^bÊÁà~ã†|→áæÁá^äÅää|&Áä~bæbÁ bå~|→äÁâæÁ⇔^äæ\*æ^äæ^\→]A{æã⇔à∞æäÁ}⇔\åÁ\*ã⇔fáã]Áb~|ã´æbÈÁŰåæÁ\*|â→vbåæãÁbåá→→Á^~\ÁâæÁ→æÁà~ãÁá~]Á→~bbÊÁ á´\⇔~^bÊÁ´→á⇔†bÊÁ\*ã~´ææä⇔^&bÊÁ俆á^äá~ãÁ´~b\bÁ~ãAäá†á&æbÁ}åá\b~æ{æãÁ~ãÁå~}b~æ{æãÁ´á|bæäÁáã⇔b⇔^&Áä⇔ãæ´\→]Á ~ãÁ⇔^ä⇔ãæ´\→]Á⇔^A´~^^æ´\⇔~^A}⇔\åÁ~ãAáã⇔b⇔^&A~|\Á~àA\åæÁ|bæÁ~àA\å⇔bņá\æã⇔á→È



## Cp"gxcnxcvkqp"qh'y g"dwkn/kp'vgo r gtcwtg'f khigtgpeg'kpr w'r ctco gygt kp'y g'lqkpygf 'r nckp" eqpetgyg'r cxgo gpv'etcembpi 'o qf gn'qh'y g'O gej cpknke 'o'Go r ktecn'Rcxgo gpv'F guki p'I wkf g

LOO 0'Xcpf gpdquuej g<sup>c</sup>, . "HOO w<sup>3</sup>."LOOI wkgttg| <sup>c4</sup>"cpf 'Lco gu'Uj gty qqf <sup>d5</sup>"

^\Á~àÁO&{&}&á^äÁÓ^{&ã~^^@^\á→ÁÓ^&&^&æã&^&ÊÁÛ^&{æãb&\]Á~àÁ\$&\\bâ|ã&åÊÁ\$&\\bâ|ã&åÊÁ\$NÊÁÛUNÌÁªÔæäæãá→ÁÒ&&å}á]ÁNä↑&^&b R´Qæá^ÊÁÜNÊÁÛUN

\*Tgegkxgf "37"Lwn "422; ="hkpcn'xgtukqp"tgegkxgf "45"Crtkn'4232D

Vj ku"r cr gt"gxcnxcvgu" vj g"ko r ngo gpvcvkqp" qh' vj g"dwkn/kp" vgo r gtcwxtg" f khrgtgpeg" kpr wi'r ctco gygt" kp" vj g"O gej cpkuvke" ó" Gorktecn'Rcxgogpv'Fgukip''I wkfg"\*OGRFI+'hqt"yg"fgukip''qh'lqkpvgf"rnckp"eqpetgvg"rcxgogpvu"\*IRERu+0'Vjg"rcxgogpv' f kıntguu. "kp" ygto u"qh'ıtcpuxgtug" etcemkpi . "ku"gzr gevgf "vq"dg"o koko kugf "yjgp" yjg" yjgt cpukgpv' ygor gtcwxtg" f khygtgpeg" ku"gs wch kp" o ci pkwfg" vq" y g"dwlwr/hp" ygo r gtcwtg"f lingtgpeg" dwl'qh' y g"qrrqukg" uki p0J qy gxgt." y lu" uwf {"uj qy u" y cv" c"dwlwr/hp" vgo r gtcwtg"f khigtgpeg"qh'4"807: E "o kpko kugu" vj g"etcenkpi "r tgf kevkqp"hqt"IRERu0V j ku"qr vko wo "xcnwg"qh'4"807: E "eqkpekf gu" y ky "y g"f ghcwn/xcnwg"kp"y g"O GRF I "qh'4'707: E. "y j kej "y cu"guvcdrkuj gf "y tqwi j "y g"pcvkqpy kf g"ecrkdtcvkqp0Vj g"ecwug"qh" y ku"r j gpqo gpqp"ku"hwt y gt "kpxguvki cvgf "d{ "vcnkpi "kpvq"ceeqwpv'y g"vtchhke"nqcf kpi "vko g. "uncd" y kenpguu. "lqkpv'ur cekpi "cpf " tgxgtuldmg'uj tlpmei g. 'dwi'pqpg'qh'yj gug'heevqtu'etg''edmg''vq'gzrnelip''y ku'epqo en(0Vj g'tguwnu'htqo ''yj ku'uwrf { 'lipf leevg''yj ev'yj g'' dwhr/hp"i tcf lgpv'uj qwf "pqv'dg"cp"kpr w'dw'ku"o gtgn{"c"ecnkdtc.kqp"eqpuxcpv0C"eqo r ctkuqp"dgy ggp"r tgf levkqpu"wkpi "yj g"

Mg{y qtf u<"O GRF I ="dwku/kp"\go r gtcwtg"f khggpeg="lqkpygf"r nckp"eqpetgyg"r cxgo gpv="etcenkpi ="\tchhe"f kutkdwkqp

o gcuvtgf "cpf" f glcwn/dwlw/ bp" go r gtcwtg'f kligtgpeg"ci clp"uwr r qtwl 'y cvlw/ku"dgwgt "ej ctce gtlugf "cu"c "echdtc lqp"eqpurcpv0

#### 30' Korgwu

Vjg" vtgcvo gpv" qh" vjg" r gto cpgpv" dwknv/kp" vgo r gtcwvtg" f khigtgpeg"kpr wi'r ctco gygt "kp" y g"O gej cpkuke"ó"Go r ktkecn" Rcxgo gpv" F guki p" I whf g" \*O GRF I =" CTC." Kpe0" GTGU" F kxkukqp" 4226+" f gugtxgu" uwwf {" dgecwug" yj g" O GRF I " r gthqto cpeg" r tgf kevkqp" o qf gnu" y gtg" ecnkdtcvgf " wukpi " c" eqpuvcpv'xcnwg"hqt"yj ku"kpr wi'y j krg"kv"ku"rghv"cu"c"o qf khcdrg" kpr wi'r ctco gygt" hqt" wugtu0' Vj ku" uwyf {" cwgo r wi' vq" dgwgt" wpf gtuvcpf " yj g" ghlgevu" qh" yj g" kpr w" xcnvg" hqt" dwkn/kp" vgo r gtcwtg" f khgtgpeg" qp" r tgf kevgf "lqkpvgf " r nckp" eqpetgvg" r cxgo gpv" \*IRER+" etcemkpi " cpf " vq" ej ctcevgtkug" vj g" hcevqtu" yj cv"kphrwgpeg" yj ku"tgrcvkqpuj kr 0'Cp"gxcnvcvkqp" ku"r gthqto gf" vq" f gvgto kpg" y j gvj gt" ej cpi gu" kp" vj g" kpr w/ xcnwg" qh' vj ku" xctkcdng"r tqf weg"tgcuqpcd<br/>ng"ej cpi gu"kp" O $G\!R\!F\,I$ /r tgf kevgf " vtcpuxgtug" etcemkpi 0' C" eqo r ctkuqp" wukpi " yj g" O GRF I " f ghcwn/' xcnwg" ci ckpuv' y g" cewcn' o gcuwt go gpv' ku' o cf g" vq" tgxgcn'y j gyj gt 'yj g'kpr w'xcnwg'uj qwrf 'dg'ugv'cu'c 'eqpuvcpv0

40' Dcemi tqwpf

Vj g" O GRF I " f gxgnqr gf " wpf gt" y g" P cwqpcn' Eqqr gtcwxg" J ki j y c{ "Tgugctej "Rtqi tco "Rtqlgev"3/62"ku"cp"cpcn{uku"cpf " f guki p" vqqn' y cv' eqpukf gtu" hcevqtu" tgr tgugpvkpi " cm' qh' y g" f guki p" kpr wu" eqpukf gtgf " kp" yj g" Co gtkecp" Cuuqekcvkqp" qh" Ucvg" J ki j y c{ "Vtcpur qtvcvkqp" Qhhkekenu" 3; ; 5" r cxgo gpv" f guki p"r tqegf wtg0' KV cnuq" cwgo r u" vq" ceeqwpv." kp" c" xgt {" eqo r tgj gpukxg" o cppgt." hqt" uqo g" qh" yj g" ng{" o gej cpkuo u" yj cv'ctg''npqy p''vq''chhgev'r cxgo gpv'r gthqto cpeg0'Vj g''qwr wu''

, Eqttgur qpf kpi "cwj qt0Go cknc<u>lo x9B r kw0gf w</u>

KUUP "324; /: 658"r tkpvlKUUP "3699/48: Z "qpnkpg

~"4232"Vc{nqt"("Htcpeku FQK 3202: 21324; : 6580423206: ; 335 jwr⊲lyyy0phqtocyqtnf0eqo

Dqwqo /wr " vtcpuxgtug" etcemkpi " ecp" f gxgnqr " y j gp" vtwemingcfu'ctg'ngecvgf 'pgct'y g'egpvtg'qh'c'r cpgn'cv'vko gu

f gvgto kpgf "kp" eqpukf gtcvkqp" qh" yj g" vgo r gtcwvtg" cpf " o qkuwtg'i tcf kgpu'r tgugpv'kp''y g''urcd''cv''y g''ko g''qh''nqcf kpi 0

Vj g"o gej cpkuvke"tgur qpug"qh" vj g"r cxgo gpv"uvt wewytg" vq" D{ "eqwr fkpi "y g"P P "cpf "y g"GKEO . "y g"O GRF I "ku"cdrg"vq" cpcn(ug" yj g" r gthqto cpeg" qh" r cxgo gpvu" qp" cp" kpetgo gpvcn" dcuku" uq" yj cv' yj g" f co ci g" ecwugf " d{" gcej " nqcf" ecp" dg"

r tqegf wtg" ku" yj g" f ktgev" eqpukf gtcvkqp" qh" enko cvke" ghhgevu" \*g0 0' yj g" f gxgnqr o gpv" qh" vgo r gtcwtg" cpf " o qkuwtg" i tcf kgpvu" kp" eqpetgvg" r cxkpi " urcdu" cpf " y gkt" ghhgev' qp" r cxgo gpv"uvtguugu"cpf "f ghqto cvkqpu+." y j kej "ctg" o qf gmgf " wukpi " yj g" Gpj cpegf " Kovgi tcvgf " Enko cvke" O qf gn' \*GKEO +." kpeqtr qtcvgf " kp" yj g" O RGF I 0' Vj g" GKEO " ku" ecr cdng" qh" r tgf kevkpi "vgo r gtcwtg"cpf "o qkuwtg"eqpf kkqpu" y tqwi j "y g" f gr y "qh'y g'r cxgo gpv'uxtwewtg"\*Kg0'kv"ku"c"qpg/f ko gpukqpcn"

o qf gn+'qp''cp''j qwtn{ 'dcuku0 yj g"kpvgtcevkqp"dgwy ggp"vtchhke" \*y j kej "ku"eqpukf gtgf "wukpi " cewcn' czrg" mcf " ur gevtc" cu" qr r qugf " vq" gs wkxcrgpv' ukpi rg" czng"nqcf u+"cpf "gpxktqpo gpvcn'nqcf u"kp" y g"eqpvgzv'qh" y g" o cvgtkcn' cpf " uvtvewtcn' r tqr gtvkgu" qh' y g'' r cxgo gpv' ku" o cpci gf "d{ "c"pgwtcn'pgw qtm'\*P P +"vj cv"ku"dcugf "qp"hkpkg/" grgo gpv'o gy qf "cpcn ugu"cpf "kpeqtr qtcvgf "kp" y g"O GRF I 0'

qh" yj g" pgy " r tqegf wtg" kpenwf g" yj g" r tgf kevgf " s wcpvkkkgu" qh" f kuvtguu"\*KgO'etcemkpi ."ur cmkpi "cpf "hcwnkpi +"cpf "tkf g"s wcrkv{" \*Kg0kpvgtpcvkqpcn'tqwi j pguu"kpf gz+"hqt "IRE Ru"r tgugpv'cv'cp{" i kxgp"\ko g0 Qpg" qh" yi g" o quv' ko r qt vcpv' ko r tqxgo gpvu" kp" yi g" pgy " y j gp" ncti g" r qukkxg" ghbgevkxg" vgo r gtcwtg" i tcf kgpvu" ctg" r tgugpv"yi tqwi j "yi g"uncd" \* Kg0'yi g"vqr "qh"yi g"uncd"ku"y cto gt" yj cp" yj g" dqwqo " qh" yj g" urcd+0' Vj g" tguwrkpi " gpxktqpo gp√" tgrcvgf "muu"qh"uwr r qtv"cv"o kf/urcd"rgcf u"vq"j ki j gt"uvtguugu" cpf " o qtg" tcr kf " ceewo wncvkqp" qh" hcvki wg" f co ci g" cv" yj g" dqwqo " qh" yj g" uncd" wpf gt" yj g" y j ggn' nqcf u0' Vqr/f qy p" vtcpuxgtug" etcemkpi "fgxgmqru" o qtg" tcrkfn{"yjgp" c" nctig" pgi cvkxg" ghhgevkxg" vgo r gtcwtg" i tcf kgpv' ku" r tgugpv' \* Kg0' vj g" vqr " qh" vj g" uncd" ku" eqqngt" vj cp" vj g" dqwqo " qh" vj g" uncd." tguwnkpi "kp"muu"qh"uwr r qtv"cv"y g"urcd"gf i gu"cpf "eqtpgtu+" cpf " j gcx { " czrg" mcf u" ctg" cr r ngf " uko wncpgqwun{ " vq" gcej " gpf "qh"yj g"urcd0'Kp"yj g"O GRF I "o qf gnu."yj g"vqvcn"vtcpuxgtug" etcemkpi "kp"IRER" \*kp" vgto u" qh" r gt" egpv" etcemgf "uncdu+" ku" qdvckpgf " d{ " cf f kpi " r gtegpvci gu" qh" r tgf kevgf " dqwqo /wr " cpf "vqr/f qy p"urcd"etcenkpi "cpf "uwdvtcevkpi "yj g"r tqdcdkrkv{" y cv'dqy ''qeewt'kp''y g''uco g'r cpgn0

Hqt" y g"f guki p"r tqegf wtg" lwuv"f guetkdgf. "kv"ku" guugp vkcn" vq"ceewtcvgn{"ej ctcevgtkug"yj g"uj cr g"qh"yj g"uncd"cv"yj g"vko g" yj g"mucf "ku" crrnkgf 0'Vj ku" tgs wktgu" f gygto kokoi "yj g"dwkn/ko" itcfkgpv." cu" y gml cu" y g" vgo r gtcwtg" cpf " o qkuwtg" f kuxt kdwk qpu" y tqwi j " y g" uncd" y kempguu" cv" y g" vko g" qh" nqcf kpi 0' Kp" yj g" O GRF I ." yj g" vtcpukgpv." qhvgp" pqprkpgct" vgo r gtcwtg" f kuvtkdwkqp" y tqwi j " y g" uncd" ku" r tgf kevgf " cv" gxgt{" jqwt" qh" yjg" r cxgo gpv' nkhg" wukpi " yjg" GKEO " \*OeEtcemgp"gv'cn0'422: +0'Cp"gs wkxcngpv'nkpgct"vgo r gtcwtg" f kh<br/>gt gpeg."  ${\ensuremath{\mathbb E} V}_{tcpulgpv}$ " ku" qdvck<br/>pgf " dcugf " qp" cp" gs wkxc<br/>rgpv" uvtguu" eqpf kkqp" \*CTC." Kpe0" GTGU' F kxkukqp" 4226+0' Vi g" vtcpukgpv" o qkuwtg" f kuvtkdwkqp" cwtkdwgf " vq" tgxgtukdrg" uj tkomci g"ko"yj g"wr r gt "72"o o "qh"yj g"urcd"ku"f gygto kogf "qp" c" o qpyj n{ "dcuku" kp" yj g" O GRF I "cpcn{ uku=" yj g" gs wkxcngpy" o qkuwtg/tgncvgf " vgo r gtcwtg " fkhgtgpeg " ku " f gvgto kpgf " d{" o cvej kpi " urcd" uvtguu" eqpf kkqpu" cpf " ku" cffgf " vq" EV<sub>stcpukepv</sub>"y cv"ceeqwpwu"hqt"dqy" vgo r gtcwstg"cpf "tgxgtukdrg" o qkuwtg" ghhgevu0' Vjg" eqpvtkdwkqp" qh" yjg" dwkn/kp" vgo r gtcwtg" f khegtgpeg."  $\mathbb{E}V_{dvkn/kp}$ ." ku" gs wcm{" ko r qt vcp v." dw/ku'o qtg'f khkewn/'\q'f gvgto kpg'\*Y gm'gv'cn04228+0

Y j gp"eqpetgvg"r cxgo gpvu"Hktuv"dgi kp"vq"ugv"cpf "j ctf gp." yj g{"ctg" kp" hwm" eqpvcev" y kj "vj g" hqwpf cvkqp" \*kQg0" yj g{"ctg" +mcvø#"cpf "ctg"kp"c"| gtq/uvtguu"eqpf kkqp" \*gxgp" y j gp"kp" yj g" rtgugpeg" qh" vgo r gtcvwtg" cpf lqt" o qkuvvtg" i tcf kgpvu+" dgecvug" yj g" eqpetgvg" ku" lwuv" ngcxkpi " c" r ncuvke" uvcvg0" Hki wtg" 3\*c+" uj qy u" j qy " c" r qukskxg" vgo r gtcwtg" f khtgtpeg" qt" i tcf kgpv" ecp" dg" f gxgmr gf " kp" yj g" urcd" kh"r cxkpi " vcngu" r nceg"f wtkpi "vj g"o qtpkpi "j qwtu"cpf "ugwkpi "cpf "j ctf gpkpi " vcng"r meg"qp"c"uwpp{ "chvgtpqqp"y j gp"y g"uqmt"tcf kcvkqp"ku" kpvgpug."ecwukpi "vj g"vgo r gtcwtg"cv" yj g"vqr "qh" yj g"urcd" vq" kpetgcug"cdqxg"y cv"cv"y g"urcd"dqwqo 0'Y j gp"y g"eqpetgyg" urcd" ugvu" wpf gt" yj gug" vgo r gtcwtg" eqpf kkqpu." c" pgi cvkxg" vgo r gtcwtg"f khhgtgpeg"ku"÷dwkn/"kpvq" y g"uncdø cpf " y g"uncd" y km'ewtn'wr y ctfu''cu''kh''c"pgi cvkxg"vgo r gtcwtg"i tcfkgpv''ku'' r tgugpv'' y j gp'' y g'' cewch' vgo r gtcwtg'' f khgtgpeg'' dgw ggp'' vj g" vqr " cpf " vj g" dqwqo " qh" vj g" uncd" ku" | gtq0' Hki wtg" 3\*d+" kmxuxtcvgu" vjku" rqkpv" d{" ujqykpi" jqy" c" vtcpukgpv" vgo r gtcwwtg" f kthgtgpeg" qh" 2îE" y km' ecwug" y g" gzco r ng" und" vq" ewtn' wr y ctf u." cu" kh' cp" gs wkxcngpv' vgo r gtcwtg" f khhgtgpeg"qh"GÁ 707ÎE"y cu"cr r nkgf 0'Rtgxkqwu"uwf kgu"j cxg" uj qy p"  $(EV_{dvkn/kp})$ " vq" dg" etkskecn" vq" IRER/r tgf kevgf " r gthqto cpeg" wukpi " y g" O GRF I " \*J cm" cpf " Dgco " 4226=" Dctgpdgti " gv" cn0' 4227=" Eqtgg" 4227=" Mcppgncpvk" cpf " J ctxg{ "4227="I wkgttg| "422: ="Mj c| cpqxkej "gv'cn0422: +0

 $O\ GRF\ I \ "x302"\ cmqy\ u"y\ g"\ wq"\ cuuki\ p"\ cp"\ kpy\ wdy"\ vq"\ cuuki\ p"\ cp"\ kpy\ wdy"\ vq''\ cuuki\ p"\ cp"\ kpy\ vq''\ vq''\ cuuki\ p"\ cp"\ kpy\ vq''\ v$ 

KV'uj qwnf "dg" pqvgf " yj cv' yj g" xcnwg" qh" ŒVdwww / p" wugf " kp" yj g" O GRF I " ku" kpvgpf gf " vq" ceeqwpv" pqv" qpn{" hqt" yj g" vgo r gtcwtg"cpf "o qkuwtg"i tcf kgpvu"kp"yj g"urcd"cv"yj g"vko g" y g"urcd"ugu. "dwi'cnuq"hqt"y g"ktgxgtukdrg"eqo r qpgpv'qh"y g" eqpetgyg" ft { kpi " uj tkpmci g" qxgt" vko g." eqpetgyg" etggr " cpf " urcd" uwr r qtv' qt" ugwrgo gpv' kpvq" y g" uwddcug" \*Mi c| cpqxkej " gv'cn0'4223="Mj c| cpqxkej "cpf "[ w'4227+0'Ukpeg"y gtg"y cu"pq" hqto cn'r tqegf wtg''hqt"f gygto kokpi "c"xcnwg''hqt"ŒV<sub>dwkr/kp</sub>"yj cv' ceeqwpvgf "hqt"cm"qh" y gug"hcevqtu" y j gp" y g"O GRF I "y cu" f gx grqr gf ."c"ukpi rg"uvcpf ctf "xcnwg"hqt" $\mathbb{C}V_{dvkn/kp}$ "\*GÁ 707  $\hat{1}E$ +" y cu'' f gvgto kpgf "f wtkpi "y g" ecrkdtcvkqp" qh"y g" O GRF I "vq" o kpko kug" yj g" f khlgtgpegu" dgw ggp" r tgf kevgf " cpf " qdugtxgf " f kuvtguugu" \*tgukf wcn'' r tgf kevkqp" gttqtu+0' Vj ku" xcnwg" y cu" tgeqo o gpf gf "hqt"i gpgtcn'wug"kp"r cxgo gpv'f guki p"cpf "ku"yj g" f ghcwnv'xcnwg"r tqxkf gf "kp" yj g"O GRF I 0'Cu"c"tguwnv."O GRF I " wugtu'o wuv'ej qqug'dgw ggp'wukpi "cp"cewcn'ukwg/ur gekhke



Hki wtg"30 Knuuntcukqp"qhighigeukxg"dukn/kp"\gorgtcuutg"fkhigtgpeg0

xcnwg"hqt"EV<sub>dvkn/kp</sub>"cpf"c"fghcwn/"xcnwg"yjcv"y cu"guvcdrkujgf" fwtkpi "yjg"o qfgrlecrkdtcvkqp"rtqeguu0

Ukpeg"ý g"f ghcwn/'xcnwg"hqt"ŒV<sub>dvkn/kp</sub>"y cu'f gxgnqr gf "cu'c" r ctv'qh'ý g"O GRF I "echdtcvkqp"r tqeguu "kv'ku"tgcuqpcdrg" vq" gzr gev' ý cv' ku" wug" y kn' r tqxlf g" i qqf " r tgf kevkqpu" hqt" ý g" etcenkpi " qh' IRER" r tqlgewi" ý cv' ctg" y kj kp" ý g" kphgtgpeg" ur ceg" qh" ý g" O GRF I "echdtcvkqp" f cvcdcug0' Hwt ý gto qtg." tgegpv'uwf kgu"d{ "Xcpf gpdquuej g"gv'cn0'\*422; +"uwi i guv'ý cv' wukpi " ý g" f ghcwn/' kpr w/' xcnwg" hqt" ŒV<sub>dvkn/kp</sub>" cnq" emugn{" r tgf kewi' ý g" r gthqto cpeg" qh' cv' ngcuv' uqo g" IRER" r tqlgewi" ý cv' ctg" qwukf g" qh' ý g" kphgtgpeg" ur ceg" qh' ý g" O GRF I " echdtcvkqp" f cvcdcug0' P q" r wdrkuj gf" uwf kgu" vq" f cvg." j qy gxgt."j cxg"gzco kpgf "ý g"ko r nkecvkqpu"qh''wukpi "c'ukpi mg" f ghcwn/'xcnwg"hqt"ŒV<sub>dvkn/kp</sub>" qp"O GRF I "etcenkpi " r tgf kekqpu" kp" i gpgtcn' qt" j cxg" gzco kpgf" kh' ŒV<sub>dvkn/kp</sub>" ku" r tqr gtn{" ceqwpvgf " hqt" y kj kp" ý g" O GRF I "htco gy qtn0' Vj gtghqtg." y ku'uwf {'y cu'f guki pgf''y kj 'ý gug"qdlgevkxgu'kp'o kpf 0

Vq" ceeqo r nkuj " y gug" i qcm." y g" O GRF I /r tgf levgf " etcemkpi "f co ci g"y cu"f gvgto kpgf "hqt"c"tcpi g"qh"xcnvgu"qh"  $\mathbb{E}V_{dvkn/kp}$ " hqt"c" ur gekklef "IRER" kp" f khtgtgpv" enko cvgu" \*y kj " tguvnkpi "f khtgtgpv"f kntkdwklqpu"qh" $\mathbb{E}V_{ucpulgpv}$ +0'Vj g"pgzv'uvgr " y cu" vq" gxcnvcvg" y g" ghtgevu" qh" y g" xctkqwu" hcevqtu" y cv" kphrwgpeg" r tgf levgf " etcenkpi " y kj " ej cpi gu" kp"  $\mathbb{E}V_{dvkn/kp}$ 0' Hcevqtu" eqpukf gtgf "kpenvf g< eqo dkpcvkqpu"qh" $\mathbb{E}V_{ucpulgpv}$ "cpf "  $\mathbb{E}V_{dvkn/kp}$ "nqt "f khtgtgpv"enko cvgu="vko g"qh"f c{"qh"tchhe"mqcf kpi " kp" f khtgtgpv"enko cvgu="cpf "xct { kpi " urcd" y kempguu" cpf "lqkpv" ur cekpi "kpf gt"eqpuvcpv"gpxktqpo gpvcn"cpf "tchhe"eqpf kkqpu0

#### 50' Ghhgev'qh'enko cvke 'eqpf kvkqpu

Ncti g" cpf" tcr kf" ej cpi gu" kp" co dkgpv' vgo r gtcwtgu" i gpgtcm{ "tguwn/" kp" y g" fgxgrqr o gpv' qh" rcti g" vcpukgpv' vgo r gtcwtg" i tcf kgpu" qt" fkhgtgpegu" kp" r cxgo gpv' urcdu') Utguugu" f wg" vq" cp" ghgevkxg"  $\mathbb{EV}_{dvkn/kp}$ " y kri" gkj gt" cf f" vq" qt" uvdvtcev' htqo " y g" utguugu" f wg" vq" ghgevkxg"  $\mathbb{EV}_{dvkn/kp}$ " y kri" gkj gt" cf f" vq" gj grgf kpi " wr qp" y gkt" tgur gevkxg" uki pu" \*rqukskxg" qt" pgi cvkxg+0' Vj gtghtgt." y g" xcnwg" qh"  $\mathbb{EV}_{dvkn/kp}$ " y cv' o kplo kugu" y g" fg xgrqr o gpv' qh'' IRE R"etcemkpi "f kurguu" i qwrf "xct {"cu"c" hwpevkqp" qh" y g" ghgevkxg"  $\mathbb{EV}_{ucpukgpv}$ " \*ceeqwpvkpi " hqt" dqy " vcpukgpv' vgo r gtcwtg" cpf " tgxgtukdrg" o qkuwtg" ghgevu+" cu" y gml'cu" y g" ucd"i gqo gvt {"cpf" o cvgtkcn" rtqr gt vkg0' \*Tgecmi ' y cv'ktgxgtukdrg" uj tkpnci g"y ctr kpi "ku"ceeqwpvgf "hqt" d{"y g" ghgevkxg"  $\mathbb{EV}_{dvkn/kp}$ 0+

Vj g" o quv" kpwkkkg" crrtqcej " hqt" gxcnwcvkpi " vj g" tgurqpug" qh" vj g" o qf gn' vq" vj g" ghtgevkxg"  $\mathbb{E}V_{dvkn/kp}$ " ku" vq" gxcnwcvg" vj g" rtgf kevgf " dgj cxkqwt" qh" c" ukpi ng" rcxgo gpv' f guki p"hqt"ugxgtcn'ukgu" vj cv'tgrtgugpv'uki pkhecpvn{"f khtgtgpv" enko cvke" eqpf kkqpu" uwej " vj cv' f khtgtgpv" o ci pkwf gu" cpf " f kvtkdwkqpu" qh" ghtgevkxg"  $\mathbb{E}V_{vcpulgpv}$ " y kn' dg" eqpukf gtgf 0' Kf"  $\mathbb{E}V_{dvkn/kp}$ "ku"vtwn{"c"f guki p"kpr wl"xctkcdng"cpf "pqv"ghtgevkxgn{" c"ecnkdtcvkqp"eqpuvcpv." vj gp"qpg" y qwff "gzr gev' vj cv' vj g"xcnwg" qh"  $\mathbb{E}V_{dvkn/kp}$  "vj cv' o kpko kugu"rtgf kevgf "IRER"hcvki wg"f co ci g" cpf "uncd"etcemkpi 'y kn'xct {"dgy ggp"ukgu0

Vj g'httuv'uvgr "kp" vj ku'uvwf { "y cu'vq"kf gpvkh{ "rqecvkqpu"kp" vj g" WUC "tgr tgugpvkpi "c'tcpi g"qh"enko cvke "eqpf kskqpu"hqt"y j kej



Hki wtg"40Htgs wgpe{ 'f kutkdwkqp"qh'f ckn{ 'co dlgpv'\go r gtcwtg" f khgtgpegu'hqt 'ukz 'ukgu0

uwhkekgpv"enko cvke"f cvc"y gtg"cxckrcdrg0'Vj g"hqmqy kpi "uksgu" y gtg" ugrgevgf <" Rkwudwti j " \*Rgppu{ nxcpkc+." Rj qgpkz " \*Ctk/ | qpc+."O kco k" \*Hmtlkf c+." Y kej kc" \*Mcpucu+."Cur gp " Eqmt/ cf q+"cpf "C vrcpvc" \*1 gqti kc+0'Hki wtg"4"r tgugpvu" yj g"Itgs wgpe {" f kvtkdwkqp" qh"f ckn{"co dkgpv" vgo r gtcwtg" tcpi gu" hqt" yj gug" ukz"f khgtgpv" mecvkqpu" dcugf " qp"c"o kpko wo " qh"9" { gctu" qh" enko cvke" f cvc" \*qdvckpgf" htqo " P cvkqpcn" Qegcpke" cpf " C vo qur j gtke"Cf o kpkuvtcvkqp" \*4229+40'Hki wtg"4" uj qy u" yj cv" enko cvke" eqpf kkqpu" xct {" eqpukf gtcdn{" co qpi " yj gug" uksgu." htqo " O kco k" y j kej " gzj kdku" yj g" uo cmguv" cxgtci g" f ckn{" vgo r gtcwtg" hnæwcvkqpu." vq" Cur gp." y j kej " gzj kdku" yj g" ncti guv'kgo r gtcwtg"uy kpi u0

Vj g"GKEO "kp" vj g"O GRF I "y cu"wugf "vq" f gvgto kpg" vj g" o ci pkwf g" qh" gs wkxcrgpv" ŒV<sub>vtcpulgpv</sub>" vj cv' f gxgrqr u" kp" c" tghgtgpeg" IRER" r cxgo gpv' f guki p" f wg" vq" vj g" erko cvg" cv" vj gug" ukz" mecvkqpu0' Vcdrg" 3" f guetkdgu" vj g" r cxgo gpv' uvtwewtg." o cvgtkcnu" cpf " f guki p" vtchhke" hqt" vj g" tghgtgpeg" IRER" wugf "kp" vj ku" cpcn( uku0' O GRF I "f ghcwn/" xcnwgu" y gt g" wugf "hqt"cml'qvj gt "f guki p" ctchhke" kpr wu0

Hki vtg"5"r tgugpul'ý g"htgs vgpe {"f kvtkdwkqp"ewtxgu"hqt" ý g" O GRF I IGÆO/eqo r vvgf"  $\mathbb{CV}_{ucpulgpv}$ " kp" ý g" tghgtgpeg" IRER" cv" gcej " qh" ý g" ugngevgf " ukgul" Vj g" f kvtkdwkqpu" hqt" Y kej kc. "C vcpvc" cpf " Rkvudwti j " ctg" uko krct." y ký " o gf kcp"  $\mathbb{CV}_{ucpulgpv}$ " xcnvgu" qeewttkpi " dgw ggp" GÁ 5" cpf " GÁ 6ÎEO" Vj g" O kco k" enko cvg" tguvnu" kp" c" uko krct" o gf kcp"  $\mathbb{CV}_{ucpulgpv}$ "GÁ6ÎE+:"dwi'yj g"xctkcdktk{ "qh'EV $_{ucpulgpv}$ "ku"j ki j gt "cv'ý ku'ukg." y kj "i gpgtcm{" nyy gt" vgo r gtcwtg" f khtgtgpegu" y cp" y cv"ctg" r tgf levgf " hqt" y g" qý gt" ukgul" Vj g" rcti guv" o gf kcp"  $\mathbb{CV}_{ucpulgpv}$ " kg" Cur gp" cpf " Rj qgplz" "GÁ : cpf " GÁ 9ÎE." tgur gevkgnu" kp" Cur gp" cpf " Rj qgplz" "GÁ : cpf " GÁ 9ÎE." tgur gevkgnu" ctg" i gpgtcm{" j kj gt" hqt" y g" ukgu" y kj " j kj gt" ckh{" vgo r gtcwtg" hwewcvkqpu" "kQ0" Cur gp" cpf " Rj qgplz+" y j kej " ku"gzr gevgf 0

Hki vtg" 5" uj qy u" vj cv" vj g" o czko vo "rtgf kevgf "r qukksg"  $\mathbb{E}V_{ucpulgpv}$ " xcnvgu" ctg" ncti gt" vj cp" vj g" o czko vo "rtgf kevgf " pgi cvksg"  $\mathbb{E}V_{ucpulgpv}$ " xcnvgu" hqt" cm" necvkqpu=" j qy gxgt." pgi cvksg"  $\mathbb{E}V_{ucpulgpv}$ " xcnvgu" ctg'r tgf kevgf "vq"qeewt "o qtg

Vcdng''30'Uwo o ct { "qh'O GRF I 'tghgtgpeg'f guki p'kpr wu0

Fguki p"hkhg"	42"{gctu
Vtchhe	
Kopkaken'wyq/yc{"cppwen'cxgtcig'fckn{"\twem	4222
vtchhe	
P wo dgt "qh'hcpgu"kp"f guki p"f ktgevkqp	4
Rgtegpvci g"qh'vtwemu"kp"f guki p"fktgevkqp™ +	72
Rgtegpvci g"qh'vtwemu"kp"f guki p"ncpg'₩ +	;7
I tqy ý 'tcvg	Pq'i tqy y
Ut wewtg '6'f guki p'hgc wtgu	
Rgto cpgpv'ewtnly ctr '*: E+	Xctlcdrg
Utvewtg''ó''nc{gtu	
Nc{gt"3"6"IRER	
I gpgtcn'r tqr gtylgu	
REE"o cvgtkcn	IRER
Nc{gt"yj kempguu"*o o +	476
Wpkv'y gki j v'*mi lo <sup>5</sup> +	4622
Rqkuqpøu'tcvkq	204
Uvtgpi yj 'r tqr gtvlgu	
Kpr w'ıgxgn	Ngxgn'5
4:/fc{"REE"oqfwnwu"qh"twrwutg"*ORc+	60B
4: /fc{ "REE"eqortguukxg"uvtgpiyi "*ORc+	рk
Nc{gt"4"6"wpdqwpf "o cvgtken	
O cvgtkcnlv{ r g	C/5
Nc{gt''y kempguu'*o o +	352
Nc{gt"5"6"wpdqwpf "o cvgtkcn	
Wpdqwpf "o cvgtkcn	C/5
Vj kempguu' <sup>™</sup> o o +	Ugo k∕kphkpkvg



Hki wtg" 50' Htgs wgpe{" f kutkdwkqp" qh' f ckn{" wgo r gtcwtg" f khtgtgpegu" kp" urcdu" hqt" tghgtgpeg" r cxgo gpv' f guki p" cv' ukz" f khtgtgpv'ukgu0

htgs wgpvn{" yi cp" r qukkksg" xcnwgu0' Vj ku" ku" ko r qtvcpv' vq" pqvg" dgecwug" yi g" ghigevu" qh" wgo r gtcwwtg" cpf " o qkuwtg" i tcf kgpvu" qp"IRER" urcd" etcemkpi "ctg" chigevgf " d{" dqyi " yi g" o ci pkwf g" cpf 'htgs wgpe{" qh' yi g'i tcf kgpvu0

$$\begin{split} Mg\{" f guetkr vqtu" hqt" y g" \& V_{ucpulgpv}" f kurtklwklqpu" uj qy p" kp" Hki vtg"5" ctg" uwo o ctkugf "kp" Vcdrg" 40' Ki'ku" kpvgtgukpi "vq" pqvg" y cv" kp" ur kg" qh' y g" qdxlqwu" erko cvke" f khgtgpegu" cv' gcej "ukg." y g"r tgf kevgf "xcnwgu" qh" & V_{ucpulgpv}" hqt "cm'ukgu" ctg" r qukkxg" cdqwi'62' "qh'y g' ko g"cpf "pgi cvkxg" cdqwi'82'$$

Nqecvkqp	Rtkoct{" rgcm'*:E+	Ugeqpf ct {" r gcm'*: E+	Cxgtci g' * E+	' ".'2: E	' 02: E
O kco k	450,	4'208	4'206	82	62
Cur gp	4'90	4'208	4'205	82	62
Y kej kw	450	4'208	4'206	83	5;
Rj qgpkz	4'904	4'208	4'205	82	62
Сусрус	450	4'208	4'206	83	5;
Rkvud wti j	4''40	4'208	4''206	83	5;

qh' yj g'' vko g0' Kp'' cf f kkqp." yj g'' o gcp'' xcnwg'' qh'' &V<sub>ucpulgpv</sub>'' ku'' cdqwv''GÁ 206ÎE ''hqt "cm'qh''yj g''ukgu0'KV'ecp''cnq''dg''uggp''yj cv'' yj gtg''ku''c''ugeqpf ct { ''htgs wgpe { ''r gcm'cv''GÁ208ÎE ''hqt ''cm'ukgu." y j kej ''ku''f kthkewn'' vq''gzr rckp''cpf ''o c { ''tgr tgugpv''c''r tqdrgo '' y kyj ''yj g''kpvgi tcvkqp''qh''yj g''GKEO ''kp''yj g''O GRF I 0

Vjg"pgzv"uvgr"ku"vq"tgncvg"vjgug"vgorgtcvvtg"fkhhgtgpvkcnu" vq"hcvki wg"f co ci g"kp"yj g"uncd0'Vj g"ceewo wncvkqp"qh"hcvki wg" f co ci g"hqt" uncd" etcemkpi "uj qwrf "dg" o kpko kugf " y j gp" yj g" ghhgevkxg" EV<sub>vtcpulgpv</sub>" cv' vj g" vko g" qh' mcf kpi "ku" gs vcn' vq "\*cpf " qh" qr r quksg" uki p" vq+" y g" ghhge vkx g"  $\mathbb{C}V_{dvkn/kp}$ " dge cwug" y g" uncdu" uj qwrf "dg"hrcv'cpf "hwrn{ "uwr r qt vgf "wpf gt" y gug"eqpf kkqpu0' Vj ku" tgncvkqpuj kr " dgw ggp" hcvki wg" f co ci g" cpf " EV<sub>dwkn/kn</sub>" ecp"dg"xgtkhkgf "d{ "twppkpi "yj g"O GRF I "uqhwy ctg"wukpi "yj g" tghgtgpeg" kpr w" f c vc" hqt" y ku" uwwf {" hqt" y g" ugngevgf " r cxgo gpv"uwuf { "ukugu"y j kng"xct { kpi "EVdwkn/kp0'Vj g"xcnwg"hqt" ŒVdwww/wp" yj cv"o koko kugu"hcvki wg"f co ci g"ecp"dg"eqpukf gtgf " vq" dg" yj g"  $\div$ qr vko cnø' xcnwg" hqt"  $\times V_{dvkn/kp}$ " cv" c" i kxgp" uk<br/>g0' Vj g"tguwnu"qh"yj ku"cpcn{uku"ctg"vcdwncvgf "kp"Vcdng"5."y j kej " r tgugpvu"eqo r wgf "hcvki wg"f co ci g"\*hqt"vqr/f qy p"etcemkpi ." dqwqo /wr "etcemkpi "cpf "vqvcn"f co ci g+"cpf "r tgf kevgf "urcd" etcenkpi "hqt"xctkqwu"cuuwo gf "xcnwgu"qh"EVdwhr/kp0'Hki wtg"6" rtgugpvu" vj g" qdugtxgf "tgrcvkqpuj kru" dgw ggp" rtgf kevgf " etcemkpi "cpf "cuuwo gf " $\mathbb{E}V_{dvkn/kp}$ "hqt "y g"ukz "uwwf { "uksgu0

Qpg" y qwrf " gzr gev" y cv" f khtgtgpv" xcmygu" qh"  $\mathbb{EV}_{dvkav_{kp}}$ y qwrf " dg" tgs wktgf " vq" o kpko kug"r tgf kevgf "etcemkpi " cv" uksgu" y kj " uki pkhkecpvn{" f khtgtgpv" enko cvgu0' Hki wtg" 5" uj qy u" y cv" y g" o ci pkwf g" cpf " htgs wgpe {" f kutkdwkqp" qh"  $\mathbb{EV}_{vcpulgpv}$ xctlgu" uki pkhkecpvn{" dgw ggp" uksgu0' J qy gxgt." Vcdrg" 5" cpf " Hki wtg" 6" uwi i guv' y cv" hqt" y g" tghgtgpeg" r cxgo gpv' f guki p" cpf "tchhke"uwo o ctkugf "kp"Vcdrg"3."y gtg"ku"c"pgctn{" eqpuvcpv" xcmwg" qh"  $\mathbb{EV}_{dvkav_{kp}}$ "\*cr r tqzko cvgn{" GÁ 807  $\hat{1}$ E +" yj cv' o kpko kugu" y g" O RGF I /eqo r wgf " hcvki wg" f co ci g" cpf " tguvnkpi " vcnwg" uki s wksg" emug" vq" y g" tgeqo o gpf gf " O GRI F " f ghcwn" kpr w' xcmwg" qh" GÁ 707  $\hat{1}$ E0' Vj ku" hkpf kpi " uwi i guvu" y cv' y g" O GRF I "r tgf keu"o kpko wo "IRER"hcvki wg" cpf "etcemkpi " cv'c" pqp/uksg/f gr gpf gpv' eqpuvcpv' qh' GÁ 807  $\hat{1}$ E " hqt" pqto cn' vchke"

 $\label{eq:K} \begin{array}{l} \mbox{K'ecp"cnq"dg"uggp"htqo "Vcdng"5"yi cv'yi g"rtgf qo kpcpv' hcvki wg" o qf g" ku" hqt" vqr/f qy p" etcemkpi " y j gp" <math display="inline">\mbox{EV}_{dvkn/kp}$ " ku" o qtg" pgi cvkxg" yj cp" yj g" GÅ 807 $\mbox{IE}$ " xcnvg" yj cv' o kpko kugu" f co ci g0' Vj g" rtgf qo kpcpv' hcvki wg" o qf g" ku" hqt" dqwqo /wr " etcemkpi "y j gp"  $\mbox{EV}_{dvkn/kp}$ "ku"hguu'pgi cvkxg" yj cp" GÅ 807 $\mbox{IE}$ 

				]	Dwknv/kp'\go	rgtcwtg'fk	hgtgpeg'*: E	+		
Ukg		4"; O2	4: 02	4'902	4'807	4'802	4707	4'702	4'607	4''602
Rkvudwti j .'RC	HFd/w	20232	20236	2024	2@22	20259	20273	2028;	202; 6	20848
	HF√f	20275	20258	20245	2@37	2023	20229	20227	20225	20224
	HFyqcn	20285	2026;	20265	2@37	20269	2027:	20296	202; 9	2084:
	VETCEM	205	204	208	2@	204	205	207	20	308
Rj qgpkz.'C\	HFd/w	20249	2025;	20276	20299	20829	2086:	20427	204:	205:4
	HF√f	20453	20885	20836	2029:	2027:	20265	20253	20244	20238
	HFyqen	2047:	20424	2088:	20877	20888	208; 3	20459	20524	205;:
	VETCEM	705	40	308	305	307	406	605	907	3502
Okcok"HN	HFd/w	20223	20223	20224	20225	20226	20228	2022;	20234	2023:
	HF√f	20252	2023;	20234	2022:	20227	20225	20224	20223	20223
	HFyqen	20253	20242	20236	20232	2022;	2022;	20233	20236	2023;
	VETCEM	208	202	202	202	202	202	202	202	2023;
Y kej kc.'MU	HFd/w HF√f HF <sub>vqvcn</sub> VETCEM	20228 20823 20829 308	2022; 2028: 20299 207	20239 20257 20273 204	20246 20244 20269 208	20256 20238 2026; 208	20269 20233 2027: 205	20273 20232 20283 205	20295 20229 2029; 2029; 208	202;: 20226 20824 302
Curgp.'EQ	HFd/w	20253	20267	20269	20289	202;4	20847	208:9	20466	20549
	HF√f	20478	208; 5	20824	20295	20279	20265	20273	2025;	2024;
	HFyqen	2049;	2044;	2086;	2085;	2086;	2088:	2044:	20495	20569
	VETCEM	806	50	305	302	304	30	50	70	; 0
Счерче."ІС	HFd/w	20226	20228	2@35	2023:	20247	20257	20255	20269	20286
	HF√f	20294	2026:	2@48	20238	20234	2022:	20228	20226	20225
	HFyqcn	20298	20275	2@5;	20256	20259	20265	20262	20273	20289
	VETCEM	207	205	2@	208	208	208	208	204	206

Vcdrg"50'Uwo o ct { "qh"dwkn/kp" vgo r gtcwtg"f khigtgpeg"cpcn{ uku"cv"f khigtgpv"ukgu0

P qyux/HF. 'hcvki wg'f co ci g=d/w.'dqwqo /wr=t/f.''qr/f qy p="VETCEM''tcpuxgtug"etcen0Dqnf "xcnwgu'kpfkecwg" j g'r tgf qo kpcpv'o qf g''qh'hcvki wg'f co ci g0Kkenkeugf "xcnwgu'kpfkecwg" j g'o kplo kugf "hcvki wg'f co ci g''qt ''tcpuxgtug''etcenkpi 0

qt"ku"r qukkkxg0'Vj g"r tgf qo kpcpeg"qh"vqr/f qy p"etcenkpi "hqt" j ki j n{ "pgi cvkxg"xcnwgu"qh"ŒV<sub>dvkn/kp</sub>"ku"pqv'wpgzr gevgf."dwv'vj g" eqo r wgf " xcnwgu" f q" pqv' uj gf " rki j v' qp" y j { " ŒV<sub>dvkn/kp</sub>" " GÁ 807ÎE" uggo u" vq" o kpko kug" IRER" vtcpuxgtug" etcenkpi " kttgur gevkxg"qh'vj g"enko cvg0

Vj g"co qwpuu"qh"etcenkpi "yj cv"ctg"r tgf kevgf "vq"f gxgrqr " y kyj "ej cpi gu"kp" yj g"O GRF I "kpr wv" CV<sub>dvkn/kp</sub>" ctg"r tgugpvgf " kp" Hki wtg" 60' Vj g" etcenkpi "r tgf kevgf " hqt" yj g" tghgtgpeg" r cxgo gpv"cv"yj g"O kco k"ukvg"ku"nguu"ugpukkkxg"vq"ej cpi gu"kp



Hki wtg"60Rtgf kevgf "etcenkpi "cu"c"hvpevkqp"qh"cuuwo gf "dwkn/kp vgo r gtcwtg"f khgtgpeg"cv"ukgu0

$$\begin{split} & \mathbb{E} V_{dvkn/_{kp}}"ij \, cp"ku" yj \, g"etcemkpi "cv" yj g"qyj gt"uksgu "cu"kpf kecvgf " d{" yj g" ncti g" tcpi g" qh" <math>\mathbb{E} V_{dvkn/_{kp}}$$
" xcnvgu" hqt" yj ku"uksg" yj gtg" r tgf kevgf " etcemkpi " ku" | gtq0' Vj g" Cur gp" cpf " Rj qgpkz"uksgu" r tgugpv" yj g" o quv' ugpukskxk{" vq"  $\mathbb{E} V_{dvkn/_{kp}}$ 0' Tgecmkpi " htqo " Hki wtg" 5+" yj cv" yj g" O kco k"uksg" i gpgtcm{"tguvnyf" kj qgpkz"u suv cmgu"  $\mathbb{E} V_{ucpulgpv}$ " xcnvgu" cpf " yj cv" Cur gp" cpf " Rj qgpkz" i gpgtcm{"tqf wegf "yj g" ncti guv'xcnvgu."yj gtg" cr gctu" vq" dg" c" eqttgncvkqp" dgy ggp" yj g" htgs wgpe{" fkutkdwkqp" hqt"  $\mathbb{E} V_{ucpulgpv}$  "cpf" yj g" ugpukskxk{" vq" kpr w" xcnvgu" qh"  $\mathbb{E} V_{uvpulqpv}$ " sp" yg" ugpukskxk{" vq" kpr w" xcnvgu" qh"  $\mathbb{E} V_{uvpulqpv}$ " sp" yg" ugpukskxk{" vq" kpr w" xcnvgu" qh"  $\mathbb{E} V_{uvpulqpv}$ " sp" yg" ugpukskxk{" vq" kpr w" xcnvgu" qh"  $\mathbb{E} V_{uvpulqpv}$ " sp" yg" ugpukskxk{" vq" kpr w" xcnvgu" qh"  $\mathbb{E} V_{uvpulqpv}$ 

K'ku''cmq ''kpygtguvkpi ''q''qdugtxg''kp''Hki wtg''6''y cv'y g''tcvgu'' qh''kpetgcug''kp''r tgf levgf ''etcemkpi ''y kj ''ej cpi gu''kp''y g''kpr w'' xcnwg'' qh''  $\mathbb{E}V_{dvkn/kp}$ '' cr r gct'' q'' dg'' eqo r ctcdng'' cv''cp{" i kxgp'' ukg."tgi ctf nguu''qh''y j gy gt''y g''kpetgcug''kp''etcemkpi ''ku''f wg'' q'' o qtg'' pgi cvkxg'' xcnwgu'' qh''  $\mathbb{E}V_{dvkn/kp}$ '' \*AQO' dqwqo /wr'' f co ci g+'' qt'' nguu'' pgi cvkxg'' xcnwgu'' \*AQO' qr /f qy p'' f co ci g+0' Vj ku'' ku'' uqo gy j cv'' wpgzr gevgf '' dgecwug'' y g'' htgs wgpe{'' f kvtkdwkqpu''qh'' $\mathbb{E}V_{vcpulgpv}$ ''r tgugpvgf ''kp'' Hki wtg''5'' cr r gct'' vq'' dg'' tcvj gt'' ungy gf'' cpf ''pqv'' cv'' cm'' y g'' u{o o gxtecn' pqto cn'' f kvtkdwkqp''qpg''o ki j v'cuuqekcvg''y kj ''uvej ''dgj cxkqwt0

#### 60' Kohnvgpeg"qh"j qwtn{ "vtchhe"f kuvtkdwkqp

 $\begin{array}{l} Qpg" \ hcevqt" \ y cv' \ o \ ki \ j \ v' \ j \ gr " \ gzr \ mkp" \ y \ j \ \{" \ y \ g" \ xcnvg" \ qh'' \\ {\ensuremath{\mathbb C}} V_{dvkn/kp}" \ y \ cv' \ o \ kpko \ kugu"r \ tgf \ kevgf \ "etcenkpi \ "f \ qgu"pqv'cr \ r \ gct" \\ vq''dg"ugpukkkg" \ vq \ 'y \ g'' \ u' \ gekhe \ "endo \ cvke" \ eqpf \ kkqpu'ku'y \ g \end{array}$ 

	<u>O qt</u> g	('vtchhke'fwtkpi'fc}	vkog"	<u>Oqtg''tclhle''cv'pki j v</u>					
J qwt"*co +	Vtchhle'₩ +	Jqwt"%ro+	Vtchhle'₩ +	J qwt"*co +	Vtchhle'₩ +	Jqwt"*ro+	Vtchhke''*⊮ +		
34	405	34	70	34	70	34	508		
3	405	3	70	3	70	3	50B		
4	405	4	70	4	70	4	405		
5	405	5	70	5	70	5	405		
6	405	6	608	6	70	6	405		
7	405	7	608	7	70	7	405		
8	7	8	608	8	608	8	405		
9	7	9	608	9	608	9	405		
:	7	:	50B	:	608	:	7		
:	7	:	508	:	608	:	7		
32	70	32	50B	32	50B	32	7		
33	70	33	503	33	50B	33	7		

Vcdrg"60Cuuwo gf "j qwtn{ "tchhke"f kwtkdwkqpu'hqt "pki j v vko g"cpf "f c { vko g"rqcf kpi "eqpf kkqpu0

eqpukf gtcvkqp"qh"y g"lvo g"qh"y g"f c{"y g"r cxgo gpv"ku"dgkpi " nqcf gf "d{" vtchhe0' Vj g"r tgegf kpi " cpcn{uku" y cu" r gthqto gf " cuuwo kpi "y cv"86' "qh"y g"vtchhe"y cu"cr r ngf "dgw ggp": "co " cpf " 9" r o ." vko gu" y j gp" r qukkxg" vtcpulgpv" vgo r gtcwtg" fkhgtgpegu"vgpf "vq"dg"r tgugpv."r ctvkcm{ "\*qt"y j qm{+'qhugv'd{" y g" pgi cvkxg" dvkn/kp" vgo r gtcwtg" fkhgtgpegu" cpf " tguvnkpi " kp" hcvvgt" urcdu" f vtkpi " mcf kpi " y kj " nguu" tguvncpv" IRER" hcvki wg"f co ci g"cpf "etcenkpi 0

Vj g"kphnægeg" qh" ý g" j qwtn{ "tchke" f kutkdwkqp" qp" ý g" xcnwg" qh" & V<sub>dwkn/kp</sub>" ý cv' o kpko kugu" rtgf levgf "LRER" etcemkpi " ecp"dg" qdugt xgf "d { "uj khkpi "ý g"f ckn{ "f kutkdwkqp" qh" tchke0' Vq" ceeqo r nkj " ý ku." ý g" O GF RI "f ghcwn" j qwtn{ "tchke" f kutkdwkqp" \*y j kej "y cu" wugf "hqt" ý g" rtgxkqwu" cpcn{ uku" cpf " ku" rtgugpvgf " kp" Vcdng" 6" cpf "f kur nc { gf "itcrj kecm{ "kp" Hki wtg"7+'y cu'uj khgf "d{ "GÁ32j "\*cmq" cu'r tgugpvgf "kp" Vcdng"6" cpf "Hki wtg"7+'y q"guvcdrkuj "c"j gcxkgt "kphnwgpeg" hqt" y ko g" mcf kpi u0' Vj g" f co ci g" cpf "etcemkpi "rtgf kevgf "d{ " ý g" O GRF I "hqt" tghgtgpeg" r cxgo gpv" cv' ý g" Rkwudwti j "ukg" hqt" ý gug" w q"mcf kpi "eqpf kkqpu" cpf "c"tcpi g" qh" &V\_dwsn/kp" xcnwgu" ku'uwo o ctkugf "kp"Vcdng'7" "Hki wtg'80

 $\label{eq:Vcdng} \begin{array}{l} Vcdng" 7" uj qy u" vj g" uvo o ct { "qh" vj g" tguwnu" htqo " vj ku" cpcn{ uku0' Cu" f guetkdgf " r tgxkqwun{ ." vj g" xcnwg" hqt" <math display="inline">\ensuremath{\mathbb{C}V_{dwkn/kp}}\) vj cv" o kpko kugf " vj g" ceewo wrcvkqp" qh" LRER" hcvki wg" cpf " vg" com v kqup" qh " LRER" hcvki wg" cpf " vg" com v kqup" qh " LRER" hcvki wg" cpf " vg" com v kqup" qh " vg" qh " vg" com v kqup" qh " vg"  



Hki wtg'70 Cuuwo gf 'j qwtn<br/>{ ''tclhhe'f kutkdwklqpu'hqt'f c{vko g'' nqcf kpi ''cpf ''p<br/>ki j $\lor$ vko g''nqcf kpi 0

etcemkpi "y cu"GÁ 807 ÎE"y j gp"y g"ttchke"mqcf kpi "y cu"o qtg" j gcxkn{ "eqpegptcvgf "f wtkpi "y g"fc{ vlo g0'Vj ku"xcnvg"uj khu" unki j vn{ "vq"GÁ 707 ÎE"y j gp"y g"ttchke"mqcf kpi "ku"o qtg" j gcxkn{ " eqpegptcvgf "f wtkpi "y g"pki j v vlo g"y j gp" $\mathbb{E}V_{ucpulgpv}$  "ku"o qtg" nkmgn{ " vq" dg" pgi cvkxg" cpf" cff kkxg" y kj "  $\mathbb{E}V_{dvkn/kp}$ 0' K' ku" pqvgy qty { "y cv'y gtg"ku"uq"nkvmg"f khgtgpeg"kp"y g"xcnvgu"qh"  $\mathbb{E}V_{dvkn/kp}$ " y cv' o kplo kug" y g" r tgf kevgf " LRER" hcvki vg" cpf " etcenkpi "hqt'y gug'f khgtgpv'tchke"mqcf kpi "f kntkdwkqpu0

Vq'hwty gt"gxcnwcvg"y g"ghhgewu"qh"y g"vko g"qh"nqcf kpi ."cm" vtchhle" y cu" cuuwo gf " vq" dg" cr r nkgf " f wtkpi " c" ukpi ng" j qwt " \*tgr tgugpvkpi " y g" j ki j guv" r qukskxg" qt " pgi cvkxg" vtcpukgpv" vgo r gtcwtg"f khhgtgpeg" eqpf kskqpu+0' Vj g" vko gu" ugngevgf " hqt" eqpukf gtcvkqp"y gtg"4"ro "\*y j gp"c"r qukskxg"i tcf kgpv"ku"r tgugpv" kp"yj g"urcd+"cpf '5"co "\*y j gp"c"pgi cvkxg"i tcf kgpv"ku"r tgugpv#0

Vcdrg"8"cpf "Hki wtgu'9"ó"; "uwo o ctkug"yj g"tguwnw"qh"yj gug" cpcn{ugu"cpf "uj qy "yj cv"yj g"xcnvg"qh"EV<sub>dvkn/lp</sub>"yj cv"o kpko kugu" r tgf kevgf "IRER"hcvki wg"cpf "etcenkpi "cv"yj g"Rkwudwti j "ukwg"ku" GÁ33ÎE'hqt"fc{vko g'hqcfkpi "cpf"2ÎE'hqt"pki j v vko g'hqcfkpi 0' Vj gug"xcnwgu"ctg"uki pkhlecpwn{"fkhlgtgpv"htqo "gcej "qvj gt"cpf" htqo "yj g" xcnwg" yj cv" tguwnu" y j gp" yj g" eqo r ngvg" ur gevtc" qh" gzr gevgf " vgo r gtcwtg" f khgtgpegu" cpf " vtchhe" mcf " f kuvtk dwkqpu"ctg"wugf 0'Kp"qyj gt"y qtf u."c"ncti g"pgi cvkxg"EV<sub>dvkt/b</sub>" \*gzeggf kpi "GÁ 33ÎE+" ku" tgs wktgf " vq" qxgteqo g" y g" ncti g" r qukkxg" i tcf kgpul 'y cv' f gxgrqr "cv' 4" r o "kp" y g" chygtpqqp." y j kng" yj g" eqo dkpgf " ghhgevu" qh" yj g" vtcpukgpv' vgo r gtcwvtg" itcfkgpv" cpf " o qkuwtg" fkhgtgpegu" \*fwg" vq" tgxgtukdrg" uj tkpne i g+"r tgugpv"kp" vj g"uned" ev '5" co "er r get" vq" dg" i tgevgt" yj cp"GÁ707îE0Vj g"ncwgt"ecug"ku"kpf kecvgf "d{ "yj g"nko kgf "vqr/ f qy p"f co ci g"y cv'qeewtu"cv'cp"cuuwo gf "EV<sub>dwkn/kp</sub>"qh"7071E0' Vj g" O GRF I " nko ku" vj g" tcpi g" qh" vj g" dwkn/kp" gs wkxcngpv" vgo r gtcwtg"fkhgtgpeg"vq"rguu"yj cp"707îE"uq"c"dtqcfgt"tcpig" gh'xcnwgu''egwrf "pgv'dg''gxcnwcvgf 0

Vj g" r tgf kevgf " etcenkpi " h<sub>t</sub>t" vj g" Rkwudwti j " ukg" wpf gt" vko g/eqpegpvtcvgf "nqcf kpi " uj qy u" vj g" vtgpf u" vj cv' y qwff " dg" cpvkekr cvgf 0' D{ "hqtekpi " vj g" cr r necvkqp" qh" cm' vtchke" nqcf u" y kj kp" gz vtgo g" eqpf kkqpu" qh"  $\mathbb{E}V_{vcpukgpv}$ " vj g" xcnvg" qh"  $\mathbb{E}V_{dvkn/kp}$ " vj cv' o kpko kugu" r tgf kevgf " LRE R" hcvki vg" cpf " etcenkpi ''ej cpi gu'uki pkhecpvn{0

	Dwhn/kp"\go r gtcwtg'f khhgtgpeg"*: E+									
Rkvudwti j	4''3807	4'3602	4'3302	4:07	4'807	4707	45Œ	202	502	707
Fc{vkog"										
HF d/w	20222	20222	20224	2@32	20252	20273	20444	20 56	40878	90593
HF√f	506;;	30542	20539	20275	20232	20229	20223	20222	20222	20222
HE vayon	506;;	30542	2053;	20285	20262	2027:	20445	20 56	40878	90593
Etcem	;405	8506	; 05	205	203	205	60	63Œ	: 906	;:03
Pkij√vkog"										
HF d/w	20222	20222	20223	20226	2@32	20244	20323	20599	30439	50649
HF√f	704; 7	4029;	20744	202;7	20252	20235	20223	20222	20222	20222
HE varen	704:7	4029;	20744	202; 7	20262	20257	20324	20599	30439	50649
Etcem	; 806	: 302	4308	20	203	203	30B	3409	7;08	;402

Vcdrg"70Uwo o ct { "qh'dwkn/kp"\go r gtcwtg'f khhgtgpeg"cpcn{ uku'tguwnu'hqt "f khgtgpv'rqcf kpi "\ko gu0

P qvg<"Hqt"f guetkr vkqp"qh'vj g"dqnf "cpf "kxcnlekugf "xcnvgu."ugg"Vcdng'50



Hki wtg"80'Rtgf levgf "etcenlipi "xu0'dwkn/kp"vgo r gtcwtg"f khigtgpeg" hqt"f c{ "cpf "pki j v'nqcf kpi "eqpf kkqpu"cv'y g"Rkwudwti j "uksg0

C''uko kret''cpen{ uku''y cu''r gthqto gf 'hqt''y g''Cur gp''yguv'uksg=" y g " tguwnu'' qh'' y ku'' epen{ uku'' etg''r tgugpygf " kp'' Vedrg'' 9'' epf " Hki wtgu'' 326'' 340' Vj g'' xenwg'' qh'' ŒV<sub>dvkn/kp</sub>'' y ev' o kplo kugu'' r tgf lewgf "IRER"he'ki wg''cpf "ured"etcenkpi "hqt "y g''Cur gp''ukg" wpf gt''y gug''eqpf kkqpu''ku''eqo r wgf "cu''dgkpi "GÅ36''cpf "2îE" hqt "f c { vlo g''cpf "pki j √vlo g''nqcf kpi u."tgur gevksgn{0'Cu''y ky i'' y g''Rkwudwti j "ukg."y g''f khtgtgpeg''ku''s vksg''uki pkheepv0'K''ecp'' cmq"dg"pqvgf " ý cv" ý g"etcemío koko kukpi "xcmvg"qh" $\mathbb{E}V_{dvkn/kp}$ " hqt"pk j  $\checkmark$ vko g"mcf kpi "hqt"ý g"tghgtgpeg"r cxgo gpv"ku"urki j vn{" f khgtgpv"hqt"ý g"w q"ukgu"\*GÁ33"xu0'GÁ36îE"hqt"Rkvudwti j " cpf "Cur gp."tgur gevksgn{ +0'Vj ku"f khgtgpeg"ku"pqv"wpgzr gevgf " dgecwug" ý g"o czko wo "r quksksg" vgo r gtcwttg"f khgtgpeg" ý cv" f gxgmr u"kp"ý g"tghgtgpeg"r cxgo gpv"hqt" ý g"Cur gp"mecvkqp"ku" j ki j gt" ý cp" ý cv"cv" ý g"Rkvudwti j "mecvkqp0'V j g"o kplo kukpi " xcmvg"hqt" $\mathbb{E}V_{dvkn/kp}$ "hqt" pki j  $\checkmark$ vko g"mcf kpi "ku"uko krct"hqt" ý g" w q"uksgu 'y j kej "o c{"qt"o c{"pqv'dg"tgcuqpcdng0

#### 70' Ghhgev'qh'xct { kpi 'uncd' vj kempguu

 $\label{eq:starting} \begin{array}{l} \label{eq:starting} \mathbf{k}^{\prime\prime} \ \mathbf{y} \ \mathbf{k}^{\prime\prime} \ \mathbf{y} \ \mathbf{k}^{\prime\prime} \ \mathbf{y} \ \mathbf{k}^{\prime\prime} \ \mathbf{y} \ \mathbf{k}^{\prime\prime} \ \mathbf{k}^{\prime} \ \mathbf{k}^{\prime\prime} \ \mathbf{k}$ 

Vcdrg'80Dvkn/kp'\go r gtcwtg'f khgtgpeg''cpcn(uku'hqt''nqcf kpi ''cv'ur gekhe'j qwtu'kp''Rkwudwti j 0

		Dwkn/kp"\gorgtcwtg"fkhgtgpeg"% E+									
Rkvudwti j	4'3;07	4''3602	4'3302	4":07	4'807	4'707	4'502	202	502	707	
Vtchhle"322'	"cv'4"r o										
HF d/w	20222	20223	20229	20264	2037	20437	20,44	50552	320827	470,4;	
HF√f	20935	20286	20232	20223	20223	20222	20222	20222	20222	20222	
HF vaxen	20935	20287	20239	20265	2037	20438	20,44	50552	320827	470,4;	
Etcem	550	206	202	204	306	608	6802	; 307	;; 02	;;0	
Vtchhle"322'	"cv'5"co										
HF d∕w	20222	20222	20222	20222	20222	20222	20222	20223	20229	2026:	
HF√f	340249	40 29	2096:	20356	2025;	2023;	20224	20222	20222	20222	
HF vayon	340249	40 29	2096:	20356	2025;	2023;	20224	20223	20229	2026:	
Etcem	;;05	:;04	5802	30	204	202	202	202	202	204	

P qvg<"Hqt"f guetkr vkqp"qh'vj g"dqrf "cpf "kxchlekugf "xcnvgu."ugg"Vcdng'50



Hki wtg"90'Rtgfkevgf "etcenkpi "xu0'dvkuv/kp"vgor gtcwtg"fkhgtgpeg" hqt"r wtg"\*eqpegpvtcvgf +"fc{"cpf"pkijv"nqcfkpi "eqpfkkkqpu"cv"vjg" Rkvudwtij 'ukg0



Hkiwtg": 0'Rtgfkevgf" hcvkiwg" fcocig" xu0'dwkn/kp" vgorgtcwtg" fkhgtgpeg'hqt"eqpegpvtcvgf"fc{vkog'vtchhke"nqcfkpi"kp"Rkvudwtij0



Hki wtg"; 0'Rtgfkevgf" hcvki wg" f co ci g" xu0'dwkn/kp" vgo r gtcwtg" fkhgtgpeg"hqt"eqpegpvtcvgf"pki j √vko g"vtchhke"hqcfkpi "kp"Rkvudwti j 0

y kenpguugu "dw" y cv" y g" tcpi g" qh" xcnwgu" i gpgtcm{" kpetgcugu" y kj " kpetgcukpi " urcd" y kenpguu" \*kg0 y kngt" urcdu f gxgrqr "i tgcvgt" vgo r gtcwtg "f khgtgpegu+0' Hki wtg" 35" cnuq"uj qy u"y g"uco g"ugeqpf ct{" rgcm'xcnwg"qh'GÁ20&îE"y cv" y cu"pqvgf "r tgxkqwuq{"cp" kpf kecvkqp" qh" cp" gttqt"qh" uqo g"uqtv' kp" y g" GKEO "cu" kv" ku" go dgf fgf " kp" y g" O GRF I 0' Vj ku" ugv' qh"  $\mathbb{EV}_{ucpukgpv}$  "f kutkdwkqp" ewt xgu" r tqxkf gu"cp"qr r qtwpk{ "vq"mqm'cv'y g"ghtgeu"qh"urcdu"y kj " y g" uco g" o gf kcp"  $\mathbb{EV}_{ucpukgpv}$ " dw" f khtgtgpegu" kp" y g" o ci pkwf g" cpf" htgs wgpe{" qh" qeewt tgpeg" kp" y g" r gcm' i tcf kgpw" qp" xcnwgu" qh"  $\mathbb{EV}_{dvknvkp}$ " y cv" o kpko kug" r tgf kevgf " IRER'hcvki wg"cpf "etcenkpi 0

Vj g" xcnwg" qh"  $\mathbb{C}V_{dwhn/lp}$ " yj cv" o kpko kugu" etcenkpi " y cu" f gwgto kpgf " hqt" gcej " urcd" yj kenpguu" hqt" yj tgg" f khhgtgpv" qcf kpi " eqpf kkqpu<" \*3+" O GRF I " f ghcwn" j qwtn{" tchhe" f kwtkdwkqp="\*4+"cm" vtchhe" qcf u"cr r hgf "cv'4" r o ="cpf" \*5+"cm" vtchhe" qcf u" cr r hgf " cv' 5" co 0' Cm' qy gt " O GRF I " kpr wu" y gtg"yj g"uco g"cu"r tgxkqwun{" f ghkpgf 0

C"uwo o ct { "qh"y g"tguwnu"qh"y ku"cpcn{ uku"ku"r tqxkf gf "kp" Vcdng": 0'K/f qgu"cr r gct "y cv'y g"etcem/o kpko kukpi "xcnwgu"qh" EV<sub>dukn/kn</sub>"dgeqo g"kpetgcukpi n{ "pgi cvkxg"y kj "f getgcukpi "urcd" y kenpguu."gur gekcm{ "y j gp" y g" vtchhke"ku"f kuvtkdwgf "qxgt" c" r gtkqf "qh'vko g"\*g0 0'O GRFI "f ghcwn/'vtchhke"f kuvtkdwkqp"qxgt" vko g+"cpf "pqv"eqpegpvtcvgf "kp"c"ukpi ng/j qwt"vko g"r gtkqf "\*g0 0" 4"r o "qt"5"co +0Vj ku"uggo u"vq"kpf kecvg"c"r quukdrg"r tqdrgo "kp" yj g" vtgcvo gpv" qh" EV<sub>dvkovko</sub>" kp" yj g" O GRF I " dgecvug" ncti gt" vgo r gtcwtg"f khgtgpegu"y gtg"uj qy p"vq"f gxgnqr "kp"y g"y kengt" urcdu" { gv"xcnwgu"qh" EV<sub>dvkn/kp</sub>" yj cv"o kpko kug"r tgf kevgf "hcvki wg" cpf "etcemkpi "vgpf "vq"dg"nguu"pgi cvkxg"hqt "vj gug" vj kengt "uncdu0 Ka" y g'tguwnu'htqo ''y gug''y tgg'urcd''y kenpguugu'kp'Rkwudwti j ''ctg'' eqo r ctgf "y ký "ý g"tguwnu"qdvckpgf "hqt "ý g"tghgtgpeg"uncd"kp" yj g"Cur gp"enko cvg"wukpi "f ghcwn/'tchhke"nqcf "f kut kdwkqpu."kv" cr r gctu'y cv'xct { kpi 'urcd'y kempguugu'y ky kp'y g'uco g'erko cvg'' j cu"cp"ghhgev'qp"y g"etcemio kpko kukpi "xcnwg"qh"EV<sub>dwkn/ko</sub>."dwi" yj cv'yj g"xcnwgu"ctg"cdqwi'yj g"uco g"hqt"uncdu"y kyj "yj g"uco g" yj kempguu" dgkpi " o qf gmgf " kp" w q" f khgt gpv' enko cvgu0' Vj ku" ci ckp''tckugu''s wguvkqpu''eqpegt<br/>pkpi ''y j gyj gt'' $\mathbb{E}V_{dwkn/kp}$ ''\*cu''kv''j cu'' dggp"f gxgmr gf "cpf "ko r ngo gpvgf "kp" y g"O GRF I + "ku" vt wn{ "c" ukg/ur gekhe"wugt/f ghkpgf "uwuf { "xctkcdng" qt "ku" ghhgevkxgn{ "c" ecrkdtcvkqp"eqpuvcpv"hqt"ukgu"y kj "pqto cn'vtchke"f kuvtkdwkqpu0

K' cr r gctu" yj cv' yj g" vtcpulgpv" erko cvke "eqpf kkqpu" kp" yj g" Rkwudwti j " urcd" o qf gri tgo ckp" tgrcvkxgn{" eqpuvcpv" hqt" xct {kpi " urcd" yj lempguugu" y j gp" crii mcf u" ctg" cr r nkg" kp" c" i kxgp" ko g"unqv" \*g0 0/4" r o "qt "5" co +0" Vj ku" ku" kpf lecvgf "d{" yj g" hcev" yj cv' yj g" etcem/o kpko kukpi " & V<sub>dvkn/kp</sub>" xcnwgu" ctg" uko krct" hqt" yj g" xcthqwu" r cxgo gpv" yj lempguu" f guki pu" kp" Rkwudwti j ." dwd" ctg" ftcuvkecm{" f khgtgpv" htqo "yj g" xcnwg" qdvckpgf "hqt" yj g" Cur gp" vguv'ugevkqp0

#### 80' Ghhgev'qh'xct { kpi 'lqkpv'ur cekpi

Iqkpv' ur cekpi "ku" cpqy gt" hcevqt" y cv" chłgevu" y g" uvtguu" cpf " eqpugs wgpvi "hcvki wg"f co ci g"ecwugf "d { "vtchhe" mcf kpi u"qp" ewtngf " urcdu0' Cp" cpcn{ uku" y cu" ecttkgf "qwl' vq" gxcnwcvg" y g" o kpło kukpi " dwkn/kp" vgo r gtcwtg" f khtgtgpeg" hqt" r cxgo gpuu" y kj "f khtgtgpv" lqkpv' ur cekpi u"\*509" cpf "608" o +" dwl' y g" uco g" y kenpguu" \*476" o o +" wpf gt" Rkwudwti j " enko cvke" eqpf kkqpu0' Vj g" tguwnu" ctg" uwo o ctkugf " kp" Vcdng" ; 0' Vj g" r tgf kevgf " etcenkpi "hqt" gcej " dwkn/kp" vgo r gtcwtg" f khtgtgpeg" ku" o wej " ncti gt" hqt" mpi gt" urcdu0' J qy gxgt." y g" ej cpi g" kp" lqkpv' ur cekpi " f qgu" pqv" chtgev" y g" o kpko kukpi " dwkn/kp" vgo r gtc/ wtg"f khtgtgpeg0

#### 90' Ghigev'qh'tcpukgpv'o qkuwtg'eqpf kkqpu'kp''y g'urcd

Cpqyj gt" hcevqt" vq" eqpukt gt" ku" yj g" ghtgev" qh" vtcpukgpv" o qkuvvtg"eqpt kkqpu"qp"yj g"etcem/o kpko kukpi "xcnvg"hqt

:

Currorp	Dwkn/kp"vgorgtcwtg"fkhgtgpeg"*E+"										
Curgp	4''4402	4'3;07	4''3602	4''3302	4":07	4'707	4502	202	502	707	
322' "cv'4	ro										
HF d/w	20222	20222	20228	2025:	203;6	20 35	409::	: 0855	440479	7302:4	
HF√f	20834	2047;	20238	20224	20222	20222	20222	20222	20222	20222	
HF varen	20834	2047;	20244	20262	203;6	20 35	409::	: 0855	440479	7302:4	
Etcem	4906	806	202	20422	509	5;0	::06	;:08	;;0	32202	
322' "cv"5	со										
HF d/w	ó	ó	20222	20222	20222	20222	20222	20222	20223	20232	
HF√f	ó	ó	70937	30,7:	20776	20862	20254	20227	20222	20222	
HF vayon	ó	ó	70937	30 7:	20776	20862	20254	20227	20224	20232	
Etcem	ó	ó	; 80	9; <b>B</b>	4509	402	203	202	202	202	

Vcdrg'90'Dwkn/kp''yo r gtcwtg'f khgtgpeg''cpcn(uku'hqt''nqcf kpi ''cv'ur gekhe''j qwtu'kp''Cur gp0

P qvg<"Hqt"f guetkr vkqp"qh'vj g"dqrf "cpf "kxcnkekugf "xcnwgu."ugg"Vcdrg"50

EV<sub>dwkn/kp</sub>0Vj g'O GRF I "ceeqwpwi'hqt''y g''tgxgtukdrg" uj tkpnci g'hp''y g"eqpetgvg''d{ "ecrewrcykpi "cp"gs wkxcrgpv" nkpgct''vgo r gtcwxtg'i tcf kgpv'cu'c''hwpeykqp"qh'y g"co dkgpv" tgrcykxg''j wo kf ks{ 'wukpi 'Gs wcykqp'\*3+0

GVI UJ K' "5 
$$y$$
 Fuw Uj kGÁUj "cxg  $\left(u^{-1/3} + G_{-1}^{-1/3}\right) / c$  j 4Ç322  
 $F_{100}$ " "E3 E4 32K24v 48 h"2 \* 426:" "492:" 4

$$U_{j,k''} \begin{cases} 3k'_{3} T J c & T J c' \hat{E} 52' \\ \\ 3k'_{6} G \hat{A} 2k'_{3} T J c & 52' & '\hat{E} \hat{A} T J c' \hat{E} \hat{A} : 2' & 5 \\ \\ \hline @''_{5} k'_{2} G \hat{A} 2k'_{5} T J c & T J c' \hat{E} : 2' \end{cases}$$

y j gtg" GVI  $_{UJ\,k}$ " ku" yj g" gs vkxcrgpv"  $\mathbb{C}V$ " qh" yj g" ej cpi g" kp" o qkuvutg" y ctr kpi "kp" o qp yj "k="gzr tguugf "kp"  $\mathbb{1}E=y$ " ku" yj g" tgxgtukdrg'uj tkprnei g'hcevqt"cu"c'htcevkqp"qh'vqvcn'uj tkprnei g



Hki wtg'340Rtgf kevgf 'hcvki wg'f co ci g'xu0dvkn/kp'\go r gtcwtg'' f khgtgpeg'hqt'eqpegpvtcvgf 'pki j v/ko g'\tchhe'hqcf kpi 'kp'Curgp0





Built-in temperature difference (°C)

----- Bottom-up damage; 2:00 pm ----- Top-down damage; 2:00 pm

-10

-5

Hki wtg"350Htgs wgpe{ 'f kutkdwkqp"qh'tcpukgpv'vgo r gtewtg" f khgtgpeg'hqt'uncdu"qh'xctkqwu'yj kenpguugu'kp"Rkwudwti j 0

5

4

3

2

1

0

\_1

5

4

3

2

1

0

-1

-20

Faligue Damage

-20

-15

eqpf kkqpu''cv'y g'Cur gp''ukg0

-15

-10

-5

Built-in temperature difference (°C)
----- Traffic 100% @ 2:00pm ----- Traffic 100% @ 3:00am

Hkiwtg" 320' Rtgfkevgf" etcenkpi" xu0' dwkm/kp" vgo rgtcwtg"

fkhgtgpeg" hqt" r wtg" \*eqpegpvtcvgf +" f c { " cpf " pki j v' mcf kpi "

0

0

5

Percent cracking after 20 years

Vcdrg": OUwo o ct { "qh'y g"etcem/o kpko kukpi "dwku/kp'i tcf kgpuu" hqt"c"tcpi g"qh'urcd"yi kenpguugu0

	Vkog'yjgp'\tcl	nkgf	
Nqecvkqp lurcd''y kenpguu	OGRFI 'fghcwnv	4''r o	5"co
Rkwudwti j 139: "o o	4:	433	44
Rkwudwti j 1476'o o	4''807	433	2
Rkwudwti j 1552'o o	47	4;	2
Cur gp 1476"o o	4''807	436	2

\*f ghcwn?" "207+="Fuw" ku" yi g" wnko cvg" uj tkpnei g" \*o o lo o "Ç"  $32^{\circ8}$ +" cpf "ecp" dg" guvko cvgf "wukpi "Gs wcvkqp" \*4+="E<sub>3</sub>" ku" yi g" ego gpv" v{r g" eqpuvcpv" \*302" hµt" v{r g" K== E<sub>4</sub>" ku" yi g" ewtkpi " eqo r qwpf " eqpuvcpv" \*304" y j gp" yi g" ewtkpi " eqo r qwpf " ku" wugf =='y "ku" yi g"y cvgt "eqpvgpv" kp" yi g" eqpetgvg" o kz. "m lo <sup>5</sup>=n"<sub>e</sub>2" ku" yi g"4: /f c{"eqo r tguukxg" uvtgpi yi ."O Rc="U<sub>jx</sub>" ku" yi g" tgrevkxg" j wo kf k{ "Incevqt" Int" o qpy "k" ecnewrcvgf "wukpi "Gs wcvkqp" \*5+=" TJ c" ku" yi g" co dkgpv" cxgtci g" tgrevkxg" j wo kf k{ ." r gt" egpv== j u"ku" yi g"f gr yi "qh"uj tkpmei g"| qpg" \*v{r kccm{ "72" o o +=ij "ku" yi g" Rqtvrcpf" ego gpv" eqpetgvg" \*REE+! urcd" yi kenpguu." o o = cpf" c"ku" yi g"REE 'eqpthekgpv'qh'yi gto cn'gzr cpukqp."tcf kcpulfE0

Vj g" O GRF I " cuuwo gu" yj cv" yj g" o qkuwtg" eqpf kkqp" y kj kp" yj g" urcd" ku" guvcdrkuj gf" d{" yj g" cxgtci g" tgrcvkxg" j wo kf kk{"cpf"yj cv'yj g"o qkuwtg"eqpvgpv"kp"yj g"wr r gt"72"o o " qh'yj g"urcd"hwewcvgu"cu"c"hwpevkqp"qh"yj g"o qpyj n{"cxgtci g" tgrcvkxg" j wo kf kk{0' Vj g" o qpyj n{" cxgtci g" tgrcvkxg" j wo kf/ kkgu"hqt"yj g"Rkwudwti j "cpf "Cur gp"uksgu"y gtg"qdvckpgf "htqo " yj g" O GRF I " qwr wi' hkrgu" cpf "ctg" r tqxkf gf " kp" Hki wtg" 36." y j kej "engctn{" uj qy u" yj cv" yj g" cxgtci g" tgrcvkxg" j wo kf k{" ku" nyy gt" cpf " hwewcvgu" o qtg" kp" Cur gp0' Vj gug" xcnwgu." cmpi " y kj "Gs wcvkqp" \*3+." y gtg" wugf " q" f gyto kpg" yj g" gs wkxcrgpv" vgo r gtcwtg" f khligtgpegu" hqt" yj gug" o qkuwtg" i tcf kgpu" \*CEV<sub>gs wkx/o qkuv</sub>0 Vj g" ewo wrcvkxg" htgs wgpe{" r rnvu" hqt" CEV<sub>gs wkx/o qkuv</sub> mqt" Rkwudwti j " cpf " Cur gp" ctg" r tqxkf gf " kp" Hki wtg"37."cpf "ctg"uwo o ctkugf "kp"Cdrg"320

Hki wtg" 37" uj qy u" yj cv" yj g" ghhgev" qh" yj g" y ctr kpi " cuuqekcvgf" y kj " tgxgtukdng" uj tkpnoi g." EV<sub>gs vkx/o qku</sub>" tcpi gu" htqo " GÁ 5vq " 5ÎE" kp" Cur gp" cpf " GÁ 307" vq" 402ÎE" kp" Rkvudwti j ."y kj "o gf kcp"xcnvgu"yj cv"ctg"pgct"| gtq"hqt"dqy " ekkgu0'Y j krg"y gug"xcnwgu"ctg"tgrcvkxgn{"uo cm"y gkt"ko r cev" eqwrf "dg"uki pkhecpv" hqt" egtvckp" eqo dkpcvkqpu" qh"  $\mathbb{E}V_{vcpukgpv}$ " cpf " $\mathbb{E}V_{dvkn/kp}$ " y cv" r tqf weg" tcr kf " ceewo wrcvkqp" qh" LRER" hcvki wg"f co ci g0

Cp" cpcn{uku" y cu" r gthqto gf " vq" hvt y gt" gxcnvcvg" y g" tgrcvkxg" eqpvtkdwkqpu" qh" gcej " eqo r qpgpv' qh" yj g" vqvcn' ghigevkxg" vgo r gtcwvtg" f khigt<br/>gpeg" ]klg0'  ${\ensuremath{\mathbb CV}}_{dvkn/kp}$ " \*<br/>eqpukt gt/ kpi "vgo r gtcwtg"cpf "o qkuwtg"eqpf kkqpu"cv"y g"vko g"qh"ugv." cmpi "y kj "kt<br/>tgxgtukdng" ft{kpi "uj tkpmci g+"  ${\ensuremath{\mathbb CV}}_{ucpulgpv}$ \*j qwtn{ "ghhgevkxg" vtcpukgpv' vgo r gtcvvtg" f khhgtgpeg+" cpf "  $\mathbb{E}V_{gs wkx/o qkuv}$  "shipe vkxg" vgo r gt cwwtg" f khipet gpeg "f wg" vq " tgxgtukdng" o qkuwtg" i tcf kgpvu+0' Hki wtg" 38" uwo o ctkugu" yjg" eqorwgf" jqwtn{" gswkxcngpv" nkpgct" vgorgtcwtg" fkhhgtgpegu." @V<sub>tcpukepv</sub>" kp" Lwn{" hqt" c" 552" o o " uncd" eqpust wevgf " kp" Rksudwti j 0' Vj g" f kust kdwskqp" qh" gs wkxcngpv" nkpgct" vgo r gtcwtg" f khgtgpegu" vj cv" qeewt" kp" Lwn{ "cv" 9" co " ctg" rtqxkfgf" kp" Hki wtg" 390' Vj ku" vko g" y cu" ugngevgf" dgecwug" y g" cxgtci g" ghgevkxg" vgo r gtcwtg" f khgtgpeg" rtgugpv" ku" enqug" vq" | gtq" cpf " yj g" tcpi g" qh" i tcf kgpvu" yj cv'f gxgmur "cv'yj ku"vko g"\*GÁ404"vq"7ÎE+"ku"t gncvkxgn{"uo cm0" Vjg" cxgtcig" ŒV<sub>gs wkx/o qkuv</sub>" hqt" Lwn{" hqt" y ku" ukwg" y cu" eqo r wgf "cu"GÁ 2043 î E0'Vj gtghqtg." vj g"eqo dkpgf "ghhgevkxg" vtcpukgpv" vgo r gtcvvtg" f khgtgpeg" vj cv" ceeqwpvu" hqt" dqvj " vgo r gtcwtg" cpf " o qkuwtg" ecp" dg" guvko cvgf " cu" dgkpi ' dgw ggp"GÁ406"cpf "60 îE"cv'9"co "kp"Lwn{ "cv'y ku"ukg0'Y kj " uwej "c"uo cm"ghbgevkxg"vgo r gtcwtg"f khbgtgpeg"kp"vj g"urcd."kv" ecp"dg"eqpenwf gf "yj cv"yj g"uncd"ku"r tgf kevgf "\*qp"cxgtci g+"vq" dg"tgncvkxgn{ "hncv"cv'9"co "f wtkpi "yj g"o qpyj "qh"Lwn{0

Vj g" etcemío kpko kukpi "xcnwg" qh'  $\mathbb{E}V_{dvkn/kp}$ " cv' ý ku" vko g" uj qwf "dg"gs wch'vq"ý g"o ci pkwf g"qh"\*cpf "qh'qr r qukvg"uki p" vq+" ý g" uwo " qh'  $\mathbb{E}V_{ucpukgpv'}$  "  $\mathbb{E}V_{gs vkx/o} qkn0'$  Vq" vguv' ý ku" tgrcvkqpuj kr."ý g"O GRF I "y cu"wugf "vq" r gthqto "cp"cpcn{ uku" y kj "cm'vtchke"mcf u"cuuvo gf "vq"dg"cr r nkgf "cv'9"co "f wtkpi " ý g"o qpý "qh"Lvn{0'Hqt"ý ku"ugv"qh"mcf "cpf "gpxktqpo gpvcn" eqpf kkqpu." xgt {"nkvng" f co ci g" y cu" r tgf kevgf " hqt"  $\mathbb{E}V_{dvkn/kp}$ " tcpi kpi "dgw ggp"GÁ 36"cpf "407  $\mathbb{E}0'$ Vj g"hcev'ý cv'xgt {"nkvng" f co ci g" ku" r tgf kevgf " y j gp"  $\mathbb{E}V_{dvkn/kp}$ " ku" GÁ 36 $\mathbb{E}$ " ku" hvtý gt" uwr r qtv" qh'eqpegtpu" tgi ctf kpi " vj g"r tqr gt"eqpukf gtcvkqp" qh"  $\mathbb{E}V_{dvkn/kp}$ kp"yj g'O GRF I 0

Vcdng": 0'Uwo o ct {	{"ah''vi g"o koko	kukoi "dwkn/k	o''i tcf kepw'h	at "f khheterv"lako	v'ur cekoi u0
			r		

	Dwkn/kp"vgorgtcwtg"fkhgtgpeg"*:E+									
Lqkpv'ur cekpi '⁵o +	433	4": 07	4'807	4707	45	2				
509										
HF d/w	20222	20224	20225	20227	20238	20267				
HF√f	20249	20227	20223	20223	20222	20222				
HF yayon	20249	20228	20226	20228	20238	20267				
VETCEM	203	2	2	2	2	204				
608										
HF d/w	20224	20232	20249	20273	20444	20 56				
HF√f	20539	20275	20237	20229	20223	20222				
HF yaven	2053:	20285	20263	2027:	20445	20 56				
VETCEM	; 05	205	203	205	60	63 <b>B</b>				

P qvg<"Hqt"f guetkr vkqp"qh'vj g"dqrf "cpf "kxcnlekugf "xcnvgu."ugg"Vcdrg"50



Hki wtg"360Cxgtci g"o qpvj n{ "tgrcvkxg"j wo kf kx{ "cv"Cur gp"cpf " Rkwudwti j "ukgu0



Hki wtg"370E wo wrcvkxg"htgs wgpe{"qh"o qkuwtg/dcugf "gs wkxcrgpv" vgo r gtcwtg"f khgtgpeg"cv"Cur gp"cpf "Rkwudwti j "uksgu0

Vcdrg''320Uwo o ct { "uvcvkuvkeu'hqt "yj g'tgxgtukdrg''o qkuvvtg/dcugf " gs vkxcrgpv'\go r gtcvvtg'f khgtgpeg0

Nqecvkqp	72' "qh'y g"₩o g"	Tcpi g"	Cxgtci g'
	* E+	* E+	* E+
Rkwudwtij	207"\q"4"2097	42 <b>0</b> "\q"30	4'207
Curgp	3047"\q"4"3097	4"407"\q"409	2025

C''r tgxkqwu''uwrf { "j cu''uj qy p"yj cv''wukpi "yj g"f ghcwnl''xcnwg" qh'ŒV<sub>dwln/kp</sub>"kp"yj g"O GRF I "tguwnu''kp"o wej "dgwgt"gurko cvkqpu" qh'yj g"qdugtxgf "etcenkpi "yj cp"yj cv'ctg"qdvckpgf "wukpi

Vcdrg'330F guki p'qh'O p IF QV'\guv'uge\kqpu'wugf 'hqt'cpcn{ uku0



Hki wtg''380F ckn{ 'tcpukgpv'urcd'\go r gtcwtg'f kh<br/>hgtgpegu'hqt 552'o o 'urcd'\p'Rkwudwti j 'kp'Lwn{ 0



Hki wtg"390F kutkdwklqp"qh'tcpukgpv'urcd'\go r gtcwtg" f khgtgpegu'cv'9"co "kp"Lvn{ "kp"Rkwudwti j 0

o gcuwtgf "xcnwgu"\*Xcpf gpdquuej g"gy"cn/l422; +0'Vj gtghqtg."cv" yj ku'\ko g. "k/ku'tgeqo o gpf gf '\j cv'\j g"f ghcwn/'xcnwg"dg"wugf 'kp" cm"cpcn{ugu"wp\kn'\j g"O GRF I "o qtg"tgcrku\kecm{ "tghrgevu"yj g" ghgewu"qh'tEV<sub>dvkn/ko</sub>"qp"IRER"urcd"etcemkpi 0

#### : 0' Gxcnwcvkpi "etcemkpi "rtgf kevkqp"wukpi "hkgrf "fcvc

Vq" xchf cvg" ý g" tcvkqpchk{" qh" wukpi " c" mecn' dvkhv/kp" gs vkxcngpv' vgo r gtcvvtg" f khgtgpeg" tcvj gt" ý cp" ý g" f ghcvhv' xchwg." r tgf kevkqpu" ctg" o cf g" y kj " dqvj " vgo r gtcvvtg" f khgtgpegu" cpf " eqo r ctgf " y kj " ý g" qdugtxcvkqp" qp" pkpg" f khgtgpv' egnu" kp" ý g" 7/" cpf " 32/ { gct" o ckprkpg" ugevkqpu" cv' O kppguqvc" Tqcf " Tgugctej " Hcektw{ " \*O p fTQCF +0' Vj g" wug" qh'ý g'r cxgo gpv'ugevkqpu'\*vguv'egnu+'eqputvevgf "cv

Egm	Uncd"yi kempguu" *oo+	Iqkpv'ur cekpi " *o +	Ncpg'y lef yj u. 'kpulef g lqwulef g'' *o +	Fqygn'fkcogvgt" *oo+	Dcug luwddcug <sup>c</sup>
7	3; 2	803	6021605	47	: 2"o o "enfur "qxgt"3952"o o "enfur
8	3: 7	608	6021605	47	352'o o 'enfur
9	3; 7	80B	6021605	47	322"o o "RCUD"qxgt": 20 o "enfur
:	3; 2	608	602 1602 1605	47	322"o o "RCUD"qxgt": 20 o "enfur
;	3; 7	608	602 1602 1605	47	322"o o "RCUD"qxgt": 20 o "erfur
32	477	80B	5091509	54	322"o o "RCUD"qxgt": 20 o "enfur
33	462	905	509 1509	54	352'o o 'h7ur
34	477	608	509 1509	54	352''o o ''n7ur
35	472	803	5091509	54	352"o o "h7ur

Pqvg<"RCUD."rgtogcdrg"curjcn/uvcdkrkugf"dcug0

c"Vj g'r ctvleng"ult g'f kuvtldwlepu'hqt "y gug"o cvgtlemi'ctg'r tqxlf gf "lep"Vcdng"350

Egm	O qf wuwu'qh't wr wetg" *4: "f c{+ *O Rc+	O qf www"qh"grcuvkekv{" *4: /fc{+" *O Rc+	Vj gto cn'eqghhelgpv' *↑31: E+	Rgtocpgpv'ewtnl" yctr"ghhgevkxg"vgorgtcwutg" fkhngtgpeg"*:E+
7	605	47.722	: 08	4'203
8	50	53.722	: 08	2
9	6	49.222	: 08	2
:	507	53.222	: 06	2
;	50	4; .722	; 0	2
32	605	43.722	: 08	2
33	7	48.222	809	2
34	608	4: .722	: 0	2
35	609	49.722	:0	2

Vcdrg'340'Dcuke'eqpetgvg'r tqr gtvkgu'qh'O p fTQCF 'egnu0

OpITQCF "ku" kf gcn' kp" yj cv' ceewtcvg" cu/dwknv" eqpuvt wevkqp." o cvgtken" ej etcevgtkuevkqp" cpf" vtehhke" f eve" etg" exekredrg" crqpi " y kj " erko cvg" f cvc" htqo " cp" qp/ukg" y gcvj gt" uvcvkqp0' Gzvgpukxg" r cxgo gpv' r gthqto cpeg" f cvc" ctg" cnuq" cxckrcdrg" y tqwi j qw''c" 37/{gct" vko g" r gtkqf 0'Cpqyj gt" wpks wg" cur gev" cdqwv" yj gug" vguv" egmu" ku" yj cv" yj g" dwknv/kp" gs wkxcngpv" vgo r gtcwtg"f khigtgpeg"dgw ggp" y g"vqr "cpf "dqwqo "qh" y g" urcd" j cu"dggp" guvcdrkuj gf "hqt" gcej " vguv" egn" kp" c"r tgx kqwu" uwf {"\*Xcpf gpdquuej g"4225+0'Vcdrg"33"eqpvckpu" y g"dcuke" f guki p"ej ctcevgtkuvkeu"qh"vj g"O p ITQCF "vguv"egmu0'Vcdrg"34" uj qy u"yj g"o gcuwtgf "REE"r tqr gt kgu"cpf "Vcdrg"35"r tqxkf gu" yjg" i tcf cykqp" ur gekhkecykqpu" hqt" yjg" i tcpwrct" dcug" cpf" uwddcug" m{gtu" cu" r tqxkf gf " d{" yj g" 3; ; 7" O kppguqvc" F gr ct vo gpv" qh" Vt cpur qt vc vkqp" \*O p IF QV+" Ur gekhkec vkqp" Ucpf ctf u0'Vj g"kpr wu'wugf "kp"yj g"O GF RI "ctg"dcugf "qp"yj g" cu/eqpuxtwevgf "fcvc0' Vjg" vtchhe" fcvc" ctg" dcugf "qp" vjg"

Vcdng"350	Op IF QV'3;; 7'i tcpwrct 'ur gekhecvkqpu'*r gt "egpv
r cuukpi +0	

		Dcug'o cvgtken					
Ukgxg'uk∤g	ењиг	етбиг	en7ur	RCUD			
5: 08"o o	ó	322	ó	ó			
53097"o o	ó	ó	ó	322			
4706''o o	ó	;76322	322	; 7ó322			
3;027"o o	ó	; 26322	; 26322	: 7ó; :			
3409''o o	322	ó	ó	ó			
;0747"o o	; 76322	: 2ó; 7	92ó: 7	72ó: 2			
P q0'6	: 76322	92ó: 7	77ó92	42ó72			
P q032	87ó; 2	77ó92	57ó77	2642			
P q042	ó	ó	ó	2ó:			
P q062	52672	37652	37652	2ó7			
Pq0422	: ó37	7ó32	5ó:	2ó5			

P qygu≺Ur gekrifetwij kpi 'tgs wktgo gput'∛ur +čenfur "cpf "enfur ."etwij gf lhcewstgf " r ctvlengu'etg"pqv'enqy gf ="enfur ."32637' "etwij gf lhcewstgf "r ctvlengu'etg'tgs wktgf =" RCUD.'r gto gedng"eur j en/uredwktugf 'deug0

Vcdng'360O GRF I "etcembpi "cpcn{ uku'qh'O p ITQCF 'Egmu'76350

kphqtocvkqp" eqmgevgf" wukpi" yig" ygkij/kp/oqvkqp" cv" Op 1TQCF" qxgt" yig" ncuv" 37" {gctu" cpf" yig" enkocvke" fcvc"

wugf "ctg'htqo 'ý g'O p ITQCF 'y gcy gt'uxcvkqp0
Vj g" dwkn/kp" vgo r gtcwtg" f khgtgpegu" hqt" y g"
O p ITQCF "r cxgo gpv'egmu"ctg" npqy p "vq"dg"gs wcn'vq" | gtq"
kp"cm'ecugu"dwi'kp"Egmi'7."y j kej "j cu"cp"dwkn/kp"gs wkxcrgpv'
vgo r gtcwtg" f khgtgpeg" qh"GÁ 208îE" \*xgt { "enug" vq" | gtq+"
\*Xcpf gpdquuej g" 4225+0' Vj g" cewcn' xcnwgu" qh" y ku"
r ctco gvgt" f khgt" f tcuvkecm{ "htqo " y g" cuuvo gf " eqpuxcpv'
xcnwg"qh'GÁ 70"îE"y cv'y cu"cuuki pgf "vq"cm'uksgu'wugf "kp"y g"

C"uwo o ct{"qh" y g" r tgf kevgf "cpf "qdugtxgf " tcpuxgtug" etcemkpi "ku"r tqxkf gf "kp"Vcdng"360'Vy q"ugr ctcvg"twpu"qh"yj g" O GF RI "y gtg"r gthqto gf "hqt"gcej "egnf)'Vj g"hktuv"twp"y cu" o cf g" wukpi " yj g" cewcn' o gcuwtgf " dwkn/kp" gs wkxcngpv' vgo r gtcwtg" f khlgtgpeg0' Cu" uj qy p" kp" Vcdrg" 36." yj g" rtgfkevkqpu" qh" yj g" O GRFI " wukpi " yj g" o gcuwtgf " dwkn/kp" gs wkxcngpv" vgo r gtcwtg" f khhgtgpeg" ctg" gz vtgo gn{" f kxgti gpv" htqo " y g" cewcn' qdugtxgf " r gthqto cpeg0' Vj ku" ecp" cnq" dg" uggp"kp"Hki wtg"3: "hqt"Egm"33"cv"OpITQCF0'Kp"cp"cwgorv" vq"kortqxg"yjg"rgthqtocpeg"rtgfkevkqp."c"ugeqpf"twp"ycu" o cf g" dcugf " qp" yj g" O GRF I " f ghcwnv" dwknv/kp" gs wkxcugpv" vgo r gtcwtg"fkhgtgpeg"qh"GÁ 707îE0'Cu"c"tguwn."c"ftcuvke" kortqxgogpv" ku" uggp" kp" yjg" rtgf kevkqp" qh" yjg" ogcuwtgf" f krxt guu"hqt "cm"egmu"gzegr v'Egmu"7."8"cpf ": 0'Vj ku"kpf kecvgu" y cv"kv"ku"o quv"nkngn( "dgpghkekcn"vq"wug" y g"f ghcwnv"xcnwg" qh" GÁ 707 ÎE" gxgp" kh' cff kkqpcn' kphqto cvkqp" ku'' cxckrcdrg" hqt" f ghkpkpi "yj g" cewcn' dwkn/kp" gs wkxcngpv' vgo r gtcwtg" f khigtgpeg0' Rtgxkqwu'' y qtml' d{ "I wkgttg| " \*422: +" uwr r qtvu'' y ku'tgeqo o gpf cvkqp0

### ; 0' Uwo o ct { "cpf "eqpenvulqpu

Vj g" vtgcvo gpv" qh" vj g" r gto cpgpv" dwknv/kp" vgo r gtcwvtg" f khigtgpeg"kp"vj g"O GRF I "f gugtxgu"uwf { "dgecwug"kv'y cu

Egm	7	8	9	:	;	32	33	34	35
Uwtxg{gf "f kuvtguut"* +	37	2	2	2	2	2	;	2	2
Rtgf kevgf "f kuvtguu"y ky "npqy p"dwku/kp"vgo r gtcwvtg"f khhgtgpeg"* +	322	322	;;	322	;9	3	: 3	:	;;
Rtgfkevgf "y ky "dwkm/kp" "'4'707: E'* +	:7	322	74	;6	76	2	4	2	64



Hki wtg'3: 0Qdugtxgf "xu0r tgf kevgf "etcemkpi "wukpi "f ghcwn/cpf" o gcuwtgf "dwkn/kp"vgo r gtcwtg"f khgtgpegu'hqt"O pTQCF "Egm'330

f gxgnqr gf "cu"c"eqpuvcpv'xcnwg"f wtkpi "yj g"ecnkdtcvkqp"qh"yj g" O GRFI "r gthqto cpeg" o qf gnu" dw' ku" nghv" cu" c" o qf khcdrg" kpr w/ hqt " wugtu0' Vj g" eqpuxt we kqp." ewt kpi " cpf " ci gkpi " qh" eqpetgyg"r cxgo gpvu" kp" f khhgtgpv" enko cvgu" ecp" dg" gzr gevgf " vq" tguwnv" kp" yjg" fgxgnqrogpv" qh" fkhhgtgpv" ghhgevkxg" vgorgtcwwtg"itcfkgpvu"kp"yjg"uncd"fwg"vq"dqvj"dwknv/kp" hcevqtu" cu" y gml cu" vtcpukgpv" ghigevu" f wg" vq" co dkgpv" gpxktqpo gpvcn' eqpf kkqpu'' f wtkpi " ugtxkeg0' Vj gug" f khgtgpv' ghbgevkxg" vgo r gtcwtg" i tcf kgpvu" y qwrf " r tqf weg" f khbgtgpv" f gi tggu"qh"urcd"f ghqto cvkqp"\*KQg0'ewtrkpi "cpf "y ctr kpi +"cpf " yj g" tguwnkpi " urcd" uvtguugu0' Vj gtghqtg." kv" ku" tgcuqpcdrg" vq" gzr gev" y cv" c" tghgtgpeg" r cxgo gpv" y qwrf " r gthqto " fkhhgtgpvn{" wpfgt" c" i kxgp" vtchhke" uvtgco " kp" fkhhgtgpv" enko cvgu0' Eqpukfgtgf "fkhligtgpvn{. "qpg" y qwrf "gzrgev' vjcv" cpcn{ugu" y qwrf " uj qy " yj cv' f khhgt gpv' xcnwgu" qh' dwkn/kp" ghigevkxg"vgo r gtcwtg"i tcf kgpvu"y qwrf "dg"tgs wktgf "vq"qhugv" y g"ghhgevu"qh"vtcpukgpv"i tcf kgpvu"vq"r tqf weg"eqpuvcpv"ngxgnu" qh'etcemkpi 'cv'xctkqwu'\guv'ukvgu0

Vj ku" uwuf { "uj qy gf " yj cv" yj gtg" cr r gctu" vq" dg" c" ukpi ng" xcnwg"qh"ghhgevkxg"dwkn/kp"vgo r gtcwttg"f khtgtgpeg"\*GÁ807 ÎE+" yj cv" o kpko kugu" IRER" hcvki wg" f co ci g" cpf " vtcpuxgtug" etcenikpi " rtgf kevgf " wukpi " yj g" O GRFI " hqt" pqto cm{" f kuvtkdwwgf " vtchike" eqpf kkqpu." tgi ctf nguu" qh" nqecn" gpxktqp/ o gpvcn" eqpf kkqpu0' Vj ku" xcnwg" ku" xgt { " pgctn{" gs wcn" vq" yj g" O GRFI " f ghcwn/"kpr w" xcnwg" qh"GÁ707 ÎE "yj cv" y cu" qdvckpgf " yj tqwi j "yj g" pcvkqpy kf g"o qf gn"ecnkdtcvkqp" rtqeguu0

Vj g" ghigevu" qh" f khgtgpegu" kp" co dkgpv" enko cvke" eqpf kkqpu" qp" yj g" dwkn/kp" i tcf kgpv" tgs wktgf " q" o kpko kug" etcenkpi "y gtg"o qtg"gxkf gpv"kh"cm" vchhe "mcf u"y gtg"hqtegf " kpvq"c"ukpi ng"j qwt"gcej "fc{"y kj "r gcm"r quksksg"qt"pgi cvksg" vgo r gtcwtg" f khgtgpegu0' Vj g" tguwnkpi " vgo r gtcwtg" f khgt/ gpegu" \*dvkn/kp" cpf " vtcpukgpv+" y gtg" pqv" gs wcn " j qy gxgt0' Kp" y g "ecug" qh" pgi cvkxg" \*pki j v vko g+"eqpf kkqpu." vj g{" y gtg" pqv" gxgp" qh"qr quksg" vki p0

Vj g"ghhgevu"qh"ej cpi gu"kp" y g"i gqo gvtke"f guki p"qh"y g" urcd" y gtg" cnq" gxcnvcvgf 0' Ej cpi kpi " y g" y kenpguu" qh" y g" tghgtgpeg"urcd"tguvnngf "kp"urki j v'ej cpi gu"kp" y g"f kuvtkdwkqp" qh'tguwnkipi "vtcpukgpvl'i tcf kgpvu."dwv'pq"uki pkhkecpvl'ej cpi gu" kp" yj g"dwkn/kp" i tcf kgpvl'tgs wktgf "vq" o kpko kug"IRER"hcvki wg" f co ci g" cpf " etcenkipi 0' Ej cpi kpi " yj g" urcd" ngpi yj " cnq" f kf " chtgevl" yj g" dwkn/kp" i tcf kgpvl' tgs wktgf " vq" o kpko kug" IRER" hcvki wg'f co ci g"cpf "etcenkipi 0

Dcugf "qp"y ku"uwf {."kv"cr r gctu"y cv"y g"o quv"tgcuqpcdrg" O GRF I " r gthqto cpeg" r tgf kevkqp" tguvnu" hqt" r cxgo gpu" y kj " v{r kecrl' vchhe" r cwgtpu" kp" o quv" gpxktqpo gpu" y kri"dg" qdvckpgf "d{"wukpi "y g"O GRF I /tgeqo o gpf gf "f ghcwn/"xcnwg" hqt"dwkn/kp" vgo r gtcwtg"f khgtgpeg"\*GA 707 ÎE-0'Qy gt" y qtrii j cu"uj qy p"y cv"r tgf kevgf "etcembpi "ci tggu" o quv"enqugn{"y kj " qdugtxgf " etcembpi "ngxgnu" kh" y g" f ghcwn/"dwkn/kp" gs wkxcrgpv" vgo r gtcwtg"f khgtgpeg" ku" wugf " tcy gt" y cp" c" ukg/ur gekhe" xcnwg0' Hwt y gt" uwf {"ku" pggf gf " q" f gxgrqr " c" o qtg" tcvkqpcri" y c {" vq" kpeqtr qtcvg" ukg/ur gekhe" mecn' dwkn/kp" gs wkxcrgpv" vgo r gtcwtg"f khgtgpegu"kpvq"O GRF I "r cxgo gpv'f guki pu0

#### Cempqy ngf i go gpw

Vjg"cwjqtu"yqwf "nkng" vq"gzvgpf "yjgkt"ukpegtg"it cvkwfg" vq"yjg" Hgfgtcn'I kijyc{'Cfokpkuvtcvkqp'hqt"rtqxkfkpi"uqog"qh'yjg'hwpfkpi" hqt'yjku'tgugctej "ghhqtv0

#### P qvgu

- 30' Go ckn<br/>the 37B r kw0gf w
- 40' Go ckn<<u>li 5; B r kw0gf w</u>
- 50' Go chr<<u>lko 0 i gty qqf B f qv0 qx</u>

#### Tghgtgpegu

- CTC." Kpe0" GTGU' Fkxkukqp." 42260' I wkfg" hţt" O gej cpkrke" ó" Gork kecn" Fguki p" qh" Pgy " cpf" Tgj cdkrkwgf" Rcxgo gpv" UttwewtgÈÂô⇔^â→â∌æ\*~ã\ÁSO∂₽ŞÁFËĞÍNÈ
- Dctgpdgti ."GU0"gy"crtÊå G€€1Èå Tgxkgy "Eqo o gpu"qp"y g"4224" O GFI "hqt"P gy "Eqpetgyg"Rcxgo gpu"r tgr ctgf "hqt"P EJ TR"3/" 62C ™24+È
- Dgengo g{gt.'E0'Mjc|cpqxkej."N0"cpf"[w'V0"42240Fgvgto kp/ kpi " co qwpv' qh' dwkn/kp" ewtrkpi " kp" lqkpvgf " r rckp" eqpetgvg" r cxgo gpv<ecug"uwsf {"qh"Rgppu{rxcpkc"K: 20'Vtcpurqtvckqp" Tgugetej " Tgeqtf <' Iqwpcn' qh' y g" Vtcpurqtvckqp" Tgugetej " Dqctf ÊAF1€ïÊÂî1½ïGÈ
- D{two.'E0"42220Cpcn{uku'd{"j ki j/ur ggf "r tqhkg"qh'lqkpvgf "eqpetgvg" r cxgo gpv'urcd"ewtxcwtgu0'Vtcpur qtvckqp"Tgugctej "Tgeqtf < Iqwtpcn'qh'ýj g"Vtcpur qtvckqp"Tgugctej 'Dqctf ÊáríĞ€Êárá½AïÈ
- Eqtgg." D0" 42270' Korngo gpvkpi " yj g" O gej cpknke" ó" Gorkken" Rcxgo gpvl' F guki p" I vkf g<' Vgej pkcn" Tgrqt vÈÁ N↑æbÊÁ ØNÌÁ Ø~}áÁU\á\æÁÛ^↔{æãb↔}]ÈÁÞæ\*~ã\Á\*ãæ\*áãæäÁà~ãÁ\åæÁØ~}áÁÒ↔&å}á Þæbæáã´áÁÑ~áãäÁÇØ∂ÞÑDÁŞã~↓æ´\ÁÚÞËI€ÏÈ
- I wkgttgl."III0"422: 0'Gxcnwckpi " ý g" IRER" Etcenkpi " O qf gri qh" ý g'O gej cpknke"ó'Go r ktecriRcxgo gpv/F guki p'I wkf gÈÁÚåæb⇔bÁ ÇŒæ&ãææÁRáb\æãá~àÁU´↔æ^´æÁ↔^ÁO↔{↔^ææã↔^&DÈÁÛ^↔{æãb↔ ~àÁŞ↔\\bâ | ã&åÈ
- I wkgttg]."III0"422: 0'Gxcnxckpi " y g"IRER" Etcenkpi " O qf grl qh" y g"O gej cpknke"6'Go r ktecriRcxgo gplF guki p'I wkf gÈÁÚåæb⇔bÁ ÇŒæ&ãææÂRáb\æãÁ~àÅU´⇔æ^´æÁ⇔^ÅO⇔{↔Åó^&↔^ææã↔^&DÈÁÛ^⇔{æãb⇔\ ~àÅŞ⇔\\bâ | ã&åÈ
- J cm"MF0'cpf"Dgco."U0"42260'Guvko cvkpi "y g"ugpukskxk{"qh' f guki p" kpr wi' xctkcdngu" hqt"tki kf"r cxgo gpv' cpcn{uku" y ky " c" O gej cpknvke" ó" Go r ktkecn' F guki p" I vkf g0' Vtcpur qtvcvkqp" Tgugctej " Tgeqtf < Iqvtpcn' qh' y g" Vtcpur qtvcvkqp" Tgugctej " Dqctf ÊA→ÏFÏÊÂIJI½ĨĞÈ

#### LOO 0'Xcpf gpdquuej g"gv"cn0

- Mcppgncpvk "X0'cpf "J ctxg{."L0"42270'Ugpukkxk/ "cpcn/ uku"qh'4224" f guki p" i wkf g" tki kf " r cxgo gpv" f kuvtguu" r tgf kevkqp" o qf gnÈÁ Oá→→à~ã^↔áÁŒæ\*áã\↑æ^\Á~àÁÚãá^b\*~ã\á\↔~^È
- Mic| cpgxkej ." N0' cpf "[ w." V0" 42270' Ceeqwpykpi "hgt" eqpetgyg" uj tkpmei g"kp" y g"O gej cpkuvke" o "Go r ktkeen "Rexgo gpv" F guki p" æäbèAEtggr."uj tkpmci g"cpf "f wtcdktkv{ "qh"eqpetgvg"uvtwewstguèA Q~^ä~^İÁÒæã↑æbÁU´↔æ^´æÁŞ|â→↔bå↔^&ÊÁQ∖äÊÁGÎÍÁ½ÁGÏGÈ
- \*ãæä↔´\↔~^Á~àÁ´ã↔\↔´á→ÁOÞOŞÁb\ãæbbæbÈÁVtcpurqtvcvkqp" Tgugctej "Tgeqtf < Lqwtpcn" qh' y g" Vtcpur qtvcvkqp" Tgugctej " Dqctf ÊÁFÍÍÎÊÁIJH½ÍGÈ
- Mic|cpqxkej."N0"gv"cnÊÂG€€ÎÈÁNäá\*\á\↔~^Á~àÁRÓŞŒÖÁà~ãÁ äæb⇔&^Á~àÁR⇔^^æb~\áÁ→~}Ë{~→|↑æÁŞ~ã\→á^äÁ´æ↑æ^\Á´~^ \*á{æ^æ^\bÈĂVtcpur qtvcvkqp"Tgugctej "Tgeqtf <"Lqwtpcn"qh"vjg" Vtcpur qtvcvkqp'Tgugctej 'Dqctf ÊÁG€ÎÍÊÁIͽIJÍÈ
- O eEtcengp."I0"Cudcj cp."T0"cpf "Xcpf gpdquuej g."I0O 0"422: 0' Gxcnxcvkpi " yj g" etcemkpi " rtgfkevgf " d{" yj g" O GRF I " wukpi " tguwnu'htqo "vj g'UT044'uo ctv'r cxgo gpv'uwf {ÈÁÔ↔^á→ÁÞæ\*~ã∖Á à~ãÁŞæ^^b]→{á^↔áÁŒæ\*áã\↑æ^\Á~àÁŰãá^b\*~ã\á\↔~^ÊÁÞæ\* [ã₩ÂV0∰CnÊÁFÏÏÎÈÁN^á→]b⇔bÁ~àÁ´~^´ãæ\æÁ\*á{æ↑æ^\Áãæb\*~^bæbÁ\~Á ŞNËIF€IJ€FÐÙŠË€€ĞÈ
- Pcvkqpcn' Qegcpke" cpf " Cvo qur j gtke" Cf o kpkuvtcvkqp." 42290' Cxckrcdrg'htgo < y y g g g cc g q x 0

Tcq. "U0cpf "Tqgurgt." LOT 0"42270 Ej ctcevgtk kpi "ghgevkxg"dvkn/kp" ewtrkpi " htqo " eqpetgyg" r cxgo gpv" hkgrf " o gcuwtgo gpvu0' ·{↔bÊÁONİÁÛ^↔{æãb↔\]Á~àÁOá→↔à~ã^↔áÈÁÞæ\*~ã\Á\*ãæ\*áãæäá**dq౫pça'ak'Vtcpur**qtvcvkqp'Gpi kpggtkpi ÊÁFĞFÁÇHDÊÁĞG€Á½ÁĞGÍÈ Xcpf gpdquuej g. "LOO 0"42250'Kovgtr tgvkpi "hcmkpi "y gki j v'f ghrgev qo gygt" tguwnu" hqt" ewtrgf" cpf" y ctr gf" Rqt vcpf" ego gpv" eqpetgyg'r cxgo gpwÈÁÚåæb⇔bÁÇŒæ&ãææÁŒ~´\~ãÁ~àÁŞå↔→~b~\*å]Á↔^Á uj tápher g hý g O gej chawe o co r necen κλέgo gpv r gun p Rtqegf wtg0h táöčás⇔√a | ä⇔æäëoáa~\ĉêáŇěáöæãáãäêÅá \*äáşềáN, ↔ Žažá Kep gpdqunej g. 'LOO 0'gv'entÊáGe€ïÈáO~↑\*áã⇔b~^á~àáşæáá{bèá Xep gpdqunej g. 'LOO 0'gv'entÊáGe€ïÈáO~↑\*áã⇔b~^á~àá≯æáb|ãæäá{bèá \*ãæä⇔´\æäÁ\*æãà~ã↑á^´æÁ~àÁ↓~↔^\æäÁ\*→á↔^Á´~^´ãæ\æÁ\*á{æ↑æ^\bÁ | b↔^&Á\åæÁRæ´åá^↔b\↔´Á½ÁÓ↑\*↔ã↔´á→ÁŞá{æ↑æ^\ÁŒæb↔&^ÁÖ|⇔äæÈÁ Micl cpqxkej."N0"gv'cnÉAG€€FÈAŒæ{æ→~\*↑æ^\A~àAãá\*⇔äAb~→ | \↔~^bAàrong for tqwtpcn' lqwtpcn' qh' Rcxgo gpv' Gpikoggtkoi êA | ^äæãA ãæ{↔æ}È Y gm" UCO" Rj knkr u." D00 0" cpf " Xcpf gpdquuej g." L00 0" 42280' S wcpvkh{kpi "dwkn/kp" eqpuvt wevkqp" i tcf kgpvu" cpf "gctn{/ci g" und"uj cr g"vq"gpxktqpo gpvcn"mcf u"hqt"lqkpvgf "r nckp"eqpetgvg"

- ãæ væxgo gpvul kovetpcvkqpcn' Lqwtpcn' hqt" Rcxgo gpv' Gpi koggtuÊÁ ÍÁCHDÊÁGÍIÁ½ÁGÎÏÈ
- Y gm " UCO" Rj knkru." DOO 0" cpf " Xcpf gpdquuej g." LOO 0" 42280' S wcpvkh{kpi "dvkn/kp" eqpuvt wevkqp" i tcf kgpvu" cpf "gctn{/ci g" ured"uj crg"vq"gpxktqpo gpvcn'nqcfu"hqt"lqkpvgf "rrckp"eqpetgvg" r cxgo gpvu0' Kpvgtpcvkqpcn'' Lqwtpcn'' hqt" Rcxgo gpv'' Gpi kpggtuÊÁ ÍÁCHDÊÁGÍIÁ½ÁGÎÏÈ
- \æ↑\*æãá\|ãæÁá^äÁ}åææ→Á→~áäbÁ↑æáb|ãæäÁàã~↑Á↔^b\ã|↑æ^\æäÁ b-áâbÈÁ Vtcpur qtvcvkqp" Tgugctej " Tgeqtf < Lqwtpcn" qh' y g" Vtcpur qtvcvkqp'Tgugctej 'Dqctf ÊÁFIJĞÏÊÁÏH½ÁF€FÈ