

8]Y FY]gYž X]Y a]W 'j YfÀbXYfh'\Uh. Fcn K Uh_]bg

Fcn'K Uh_]bg']gh'5i hcf]b'XYf'j cb'XYf'?f]h]_'[YZY]YfhYb'?f]a]gYf]Y 8 = A Y['8 U`hcb"' \Rightarrow fY'Fca UbYž'X]Y']a 'DYU_'8]ghf]Wh'gd]Y`Ybž'g]bX ZØf']\fYb'Ui » Yf[Yk Ò\b`]W\Yb'C fhgg]bb'VY_Ubbh''8Yb_Yb'G]Y'Ub gh]a a i b[gj c``Y'A ccfYž'_bcff][Y'K À`XYf'i bX'[fi gY`][Y'`c_U`Y, VYf`]YZYfi b[Yb"' \Rightarrow fY'DfchU[cb]gh]b']gh'hYa dYfUa Ybhj c``i bX gYbg]VY`ž'UVYf'k Ug'a]W\'Ua 'ghÀf_ghYb'Ub'Fcn'5fVY]h'fY]nhž']gh]\fY'6YfY]hgW\UZhž'g]W\']b'X]Y'Xi b_`YfYb'9W_Yb'XYf'; YgY``gW\UZh i cfni k U[Yb"

±0.7i h'hc'h\Y'6cbY'i bhYfgi W\h'Fcn'X]Y'DfUl]g'XYf A UggYbh]Yf\U`hi b["'GY]bY'GW\fYW_Yb'k YfXYb']a 'Fca Ub'[fc» [YgW\f]YVYbž'UVYf'XUg'a cfU`]gW\Y'<Yfn'XYf'; YgW\]W\hY'VY\]bXYfh X]Y'<UbX`i b['b]Y"'HUhgÀW\`]W\'Yf\Ò\Yb'X]Y'[fUi g][Yb'FYU`]hÀhYb bi f'X]Y'GdUbbi b["

K]f`\UVYb`a]h`Fcn`ØVYf`]\f`bYi YghYg`6i W\`[YgdfcW\Ybž'k Ufi a]\f`H]YffYW\hY`k]W\h]['g]bXž'k]Y`g]Y`a]h`XYa '@cW_Xck b`i a [Y\h i bX`Ub`X]Y`FY]gYž'Ub`X]Y`g]Y`g]W\`Ua ``]YVghYb`Yf]bbYfh"

=\fY'H\f]``Yf'gd]Y`Yb']a 'DYU_'8]ghf]Wh"'K Ug'a UW\h'X]Yg'ni Y]bYf'ØVYfnYi [YbXYb'?i`]ggY3

"U`h1 8]Y`&"\$\$\$`\\\fY`U`hY`9]VY\Z`X]Y`Fc_!5!6\\mY`6\U\\m\\]bgd]f]Yf\\\ 28\Uj]X`; i\m`\Yf\#77`6\M\&\\\$\\8]Y`\&\\\$\\\\fY`\U`\\Y`9]\Y\Z\\X]Y`Fc_!5!6\m\Y`6\U\\m`]bgd]f]\Yf\\\

 $8 \ YfVmg\]fY']gh'j \ c```j \ cb'X]YgYb'C \ fhYb'' \ ghY]`Y'?`]ddYbž'hØW_]gWXY \\ GhY]bVfi \ WXhØa \ dY``]b'j \ YfV`ØZZYbXYb': UfVYbž'i \ bhYf]fX]gWXY'< O\`Yb'' \\ I \ bX'X]Y'?i \ `hi \ f']gh'fY]WX'Ub'A \ mh\Yb'i \ bX'@Y[YbXYbž'X]Y'a]h']\bYb \\ Y]b\Yf[Y\Yb''K]f'\UVYb'gc[Uf'Y]b'dUUf'VOgY'A YYf' b[ZfUi Ybž cVk c\``k]f'+$'A Y]`Yb'j \ ca 'A YYf'YbhZYfbh'q]bX''$

G]Y 'g]b X 'b] W h bi f '5 i hcfž 'gcb X Y fb 'Ui W 'Ui g[Y V]`X Y h Y f H]Y fh f U]b Y f " 'K]Y '_ Ua 'Y g 'X Uni 3

Jcffi bX~&\$~\J\fYb~\UVY~]WX~a]WX~YbhgWX~cggYbž~XYb~GWXf]hh~ni

k U[Yb'i bX'a]f'Y]b'Y][YbYg'DZYfX'ni ni `Y[Yb"'=\W\\\UhhY'XUg'; `\Ø_ž\\Ui Z'Y]b'6i W\\`a]h'XYa 'H]hY`'8cb h'G\cch'h\Y'8c['jcb'?UfYb'Dfmcfni 'ghc\"Ybž']b'XYa 'Yg'i a 'acXYfbY'H]YfhfU]b]b[ghYW\\b]_Yb'a]h dcg]h]j Yf'J YfghÀf_i b['[]b["'=\W\'k Uf'jca''Ui Z'8ca]bUbn VUg]YfYbXYb'HfU]b]b['i bVYY]bXfi \\W_h'i bX'gi \\W\ hY'bU\W\'Yhk Ug K]ggYbg\\UZh`]\W\YfYa''i bX':fYi bX`]\W\YfYa''

`U`h1 Fcn`bi hnh`7`]W_YfhfU]b]b[a]h`DZYfXYb 2B]W_ 6fi bX`Y#G\i hhYfghcW_`Fcn`bi hnh`7`]W_YfhfU]b]b[a]h`DZYfXYb

8 UgʻVfUWkhYʻa]Wk'ni a '7`]W_YfhfU]b]b[ʻi bXʻ]WkʻVYgWk`cggžXUg cZZ]n]Y``YʻHfU]bYfdfc[fUa a 'ni 'UVgc`j]YfYbž'k UgʻZØfʻa]Wk'ni a ; `ØW_FY]gYbʻni 'Y]b][Ybʻk i bXYfgWkÒbYbʻCfhYbʻ]bʻ? U`]Zcfb]Ybʻi bX]a '6i bXYgghUUhʻK Ug\]b[hcbʻVY]b\U`hYhY'''9gʻk UfʻY]b ZUbhUgh]gWkYfž'Ui [YbÒZZbYbXYfʻ?i fgʻi bXʻYfʻZi b_h]cb]YfhʻVY]'U``Yb H]YfYbžY]bgWk`]Y»`]Wk'A YbgWkYb°

8]Y'U``YfYfghY'?i fn[YgWk]WkhYž'X]Y']Wk'[YgWkf]YVYb'\UVY'fH\Y7ck głž'\UhhY'Y]b'H]YfhfU]b]b[gh\Ya U'fi bX'bUhØf`]Wk'A cfXłž'i bX]Wk'\UVY'Yg'[YgWkUZhž'7`]W_Yf!hfU]b]YfhY'GWk Y]bY']b'a Y]bbYi YghYg'6i Wk'7i h'hc'h\Y'6cbY'ni ']bhY[f]YfYb'''K Ufi a 'j cbY]bYa 'A Ubb'[YfYhhYh'k YfXYbž'k Ybb'X]Y'5fVY]h'Ui Wk'j cb'Y]bYa GWk Y]b'Yf`YX][h'k YfXYb'_Ubb3

7i h'hc'h\Y'6cbY']gh'Y]b'H\f]``Yfž'VYZUggh'g]W\'UVYf'Ui W\
a]h'XYf'A UggYbh]Yf\U`hi b["'K]Ygc'XYb3

GY]h']W\ 'XYb_Yb'_Ubbž'V]b']W\ 'YbhgYhnh'ØVYf'X]Y

A UggYbh]Yf\U`hi b['i bX'a UW\Y'a]f'VYgcbXYfg'Gcf[Yb'i a

GW\k Y]bY"'J]Y`Y'GW\k Y]bY'Ui Z'XYf'[UbnYb'K Y`hij YfVf]b[Yb']\f

[UbnYg'@YVYb']b'6cl Ybž']b'XYbYb'g]Y'g]W\ 'b]W\h'Y]ba U`'i a XfY\Yb

_\ObbYb"'8Yb_Yb'G]Y'bi f'XUfUbž'k]Y'j]Y`'GdU\(\text{Y}\) 'Y]b'dUUf'Ghi bXYb

Ui Z'Y]bYa 'F mUbU]f!: `i ['a UW\Ybž'i bX'ghY``Yb'G]Y'g]W\ 'XUg'ZØf'\(\text{A}\)f

[UbnYg'@YVYb'j cf"

CVkc\``X]YgY`GUiYbghÀ``Y`]b`XYf`9I`jYfVchYb`g]bXž`XØfZYbGWkY]bY`bUWX`XYf`;YVifh`bcWX`ZØbZ`KcWXYb``Ub[`]b5VZYf_Y`ViWxhYb``[Y\U`hYb`kYfXYb"'8]Yg`g]bX`k]YXYf`k]bn][Y

?]ghYbž'X]Y'g]Y'XUfUb'\]bXYfbž'g]W\'i a ni XfY\Yb'cXYf'gc[Uf'bUW\]\fYb'\ \Rightarrow b[Yb'ni '[fY]ZYb"'8]Y'A ØhhYf'\UVYb'a Y]gh'_Y]b'6YhhnYi [ž cVk c\``g]Y'XYb'ghUf_Yb'8fUb['\UVYbž'Y]b'BYgh'ZØf']\fY'6UVmg'ni VUi Yb"'\ \Rightarrow f'@Y]XYb']gh'i bj cfghY``VUf"

8]Y'a Y]ghYb'A YbgW\Yb'k]ggYb'Y]bZUW\'b]W\hž'XUgg'X]Yg'[YgW\]Y\h 'i bX']b'Y]bYf'n]j]`]g]YfhYb'; YgY``gW\UZh'gc``hY'Yg'b]W\h'gc'gY]b°

 $K Ug']gh'Y]bY'GUW Yž'j cb'XYf'G]Y'\cZZYbž'XUgg'X]Y'@YgYf'g]Y j cb'7i h'hc'h\Y'6cbY'a]hbY\a Yb3$

K Ybb'a Y]b'6i W\'XYb'Y]bYb'cXYf'UbXYfYb'XUni 'UbfY[hž'VY]a?Ui Z'j cb': `Y]gW\'Yhk Ug'a Y\f'bUW\ni XYb_Yb'i bX'j]Y``Y]W\h'Ui Z 6]c!'cXYf': fY]`UbXgW\k Y]bY'i a ni ghY][Ybž'ZfYi h'a]W\'XUg"

A]f']gh'VYk i gghž'XUgg']W\ 'Yg']a 'J Yf[`Y]W\ 'ni 'j]Y`Yb'A YbgW\YbgY\f'`Y]W\ h'\UhhY"'K]f'\UVYb'GdUn]Yf[Àb[Y'X]fY_h'j cf'i bgYfYf < Ui ghØfž'Xi fW\ 'K À`XYf'i bX'UV[Y`Y[YbY'HÀ`Yfž'U`gc'k Uf'Yg'b]W\ hU``ni 'gW\k Yf'ZØf'a]W\"'=\W\\UVY'[fc>Yb'FYgdY_h'j cf'XYbYbž'X]Y XYb'@cW_Xck b']b'Y]bYf'GhUXhk c\bi b['j Yf_fUZhYh'\UVYb"

9]b B UW hY] `XYg @YVYbg `\]Yf XfUi » Yb `]ghž XUgg a Ub `g]W ``Y]W h j cb `XYf J Yf `U[gk Y `h ``cg[Y `Ògh ZØ\ `hž i b X `]W\ `\ UVY `6 i W\ ZYgh]j U `g i b X J Yf UbghU `hi b [Yb `X]YgYg `\$J\f `XYZ]b]h]j 'j Yfd Uggh" 5 VYf]bg[YgUa h 7ZØ\ `Y `]W\ a]W\ 7GY\f [`Ø_`]W\ " \=\W\ `\ UhhY \[fc » Yg '; `Ø_Ž XUgg `]W\ k Y]hYf 7GW\ fY]VYb _cbbhY "

'U`h1 8Yf'DYU_'8]ghf]Wh']gh'j c``Yf'a U`Yf]gW\Yf
K UbXYfk Y[Y 2 < Y`Yb' < chgcb#G\i hhYfghcW_'8Yf'DYU_'8]ghf]Wh']gh
i c``Yf'a U`Yf]gW\Yf'K UbXYfk Y[Y</pre>

K]Y'G]Y'j cb'a Y]bYb'?ca a YbhUfYb'ni 'GWk Y]bYb'Yfk UfhYb _\ObbYb\Z'V]b']W\'Zfi ghf]Yfh'\ØVYf'XYb'A Ub[Y'\Ub'; Ygdf\AW\Yb'\ØVYf DUbXYa]Yb'i bX'H]YfUi gVYi hi b["'5i W\'k Ybb'X]YgYf'j cb'Y]bYa bUggYb'A Uf_h'ni 'ghUa a Yb'gW\Y]bh\Z'VYghY\h'Y]bY'[i hY'7\Ub\W\Z

XUgg`XYf`bÀW\ghY`j cb`Y]bYf`: UVf]_ZUfa `_ca a hž`XU`g]Y`dYfZY_hY 6fi hghÀhhYb`ZØf`J]fYb`g]bX"`I bX`X]Y`bÀW\ghY`DUbXYa]Y`_ÒbbhY Xi fW\Ui g`Y]bY`k Y]hUi g`\Ò\YfY`GhYfV`]W_Y]hgfUhY`\UVYb"`@c\bh`Yg g]W\`k]f_`]W\`ZØf`V]``][Yg: `Y]gW\3`A]W\UY``; fY[Yfg`6i W\`<ck`hc Gi fj]j Y`U`DUbXYa]W]gh`ni `X]YgYa `H\Ya U`]bhYfYggUbh`fi bX n]Ya`]W\`VYÀb[gh][YbX°Ł"

@UggYb'G]Y'i bg'Ui Z'X]Y'FY]gY'Y]b[Y\Ybž'X]Y'G]Y'j YfÀbXYfh \Uh"'K Y`W\Y'FY[]cb'cXYf'FY]gY'\Uh'G]Y'Ua 'a Y]ghYb VYY]bZ'i ggh3

8 Ugʻk Ufʻk U\fgWXY]b`]WX žʻU`gʻ]WX ʻ5bZUb['XYfʻbYi bn][Yfʻ¾J\fY '%(
A cbUhY ``Ub['[YfY]ghʻV]bž'ni bÀWXghʻa]hʻnk Y]': fYi bXYbʻi bX`XUbbž
bUWXXYa 'g]YʻbUWX '< Ui gYʻ[Y[Ub[Ybʻk UfYbž'a]hʻXfY]'ni ZÀ``][Yb
A ÀbbYfbžʻX]Yʻ]WXʻ]bʻGmXbYmʻ[YhfcZZYbʻ\UVY"'fB]YgYfʻ`YhnhYʻHY]`
VYY]bXfi W_hYʻa Y]bYʻ9`hYfbʻb]WXh"Łʻ¾X 'VY[Ubbʻ]bʻ¾bX]Ybʻi bX
YbXYhYʻ]bʻ5i ghfU`]Yb"

K]f`\UhhYb`_Y]bY`A cV]`hY`YZcbY`i bX`f]YZYb`i bgYfY`9`hYfb`Yhk U
U``Y`XfY]`A cbUhY`Ubžk cVY]`k]f`]a `5``[Ya Y]bYb`X]Y`BUW\f]W\h
VY_Ua Yb.` 5``Y`@Y]hi b[Yb`bUW\`9b[`UbX`g]bX`VYgYhnh "`K]f
j Yf`]Y» Yb`i bg`Ui Z'dcgh`U[YfbXY`Dcghž`_Ua Yb`Ub`Y]bYa `bYi Yb`Cfh
Ub`i bX`\cZZhYbž`XUgg`Y]b][Y`i bgYfYf`: fYi bXY`i bX`J Yfk UbXhYb
j cf\Yf`Ub`X]Y`5XfYggY`[YgW\f]YVYb`\UhhYbž`X]Y`k]f`]\bYb`]b
i bgYfYb`j cf\Yf][Yb`6f]YZYb`[Y[YVYb`\UhhYb"`K]f`k UfYb`Ui Z'Y]bY
5fh`i bX`K Y]gY`Ui » Yf`?cbhU_hž`X]Y`Yhnh`ZUgh`i bXYb_VUf`]gh"

'U`h1 8U`!GYY`]b`?UgW\a]f 2 HUddUgUb`D\i f]gUa f]h#G\i hhYfghcW_ 8U`!GYY`]b`?UgW\a]f

K]f`\UVYb`X]Y`Y]bZUWXYb`8]b[Y`XYg`@YVYbg`gWXÀhnYb`[Y`Yfbhž]bgVYgcbXYfY`Hc]`YhhYb"`9]b`i bYfk UfhYhYg`<][\`][\hik Ufž'U`g`k]fa]h`Y]bYa ::`i [`bUWX`?UgWXa]f`JYfgdÀhi b[`\UhhYb`faY\f`XUnikY]hYf`i bhYbŁi bX`]b`Y]bYa '<chY``a]h`hUhgÀWX`]WX`\Y]»Ya 'K UggYffi bgYfYa 'YfghYb`gY]h`XfY]`AcbUhYbŁi bhYf_UaYb"`⇒W`gWXÀhnYacXYfbY`GUb]hÀf]bghU``Uh]cbYb`]aaYf`bcWX`]b`Y]bYai b[YkÒ\b`]WXYb`AU»Y"

K]f`\UhhYb`Y]bY`gY`hgUa Y`i bX`XmgZi b_h]cbU`Y`6Yn]Y\i b[`ni i bgYfYa '@cbY`m`D`UbYh`FY]gYZØ\fYf"`K Ybb`Yg`nk Y]`K Y[Y`Ui Z Y]bYb`6Yf[`[ÀVY` `Y]bYf`a]h`Y]bYf'_i fnYb`6i gZU\fh`i bX`XYf UbXYfY`a]h`Y]bYf`%\$!A Y]`Yb!K UbXYfi b[`Xi fW\`Y]bYb i bVY_UbbhYb`K U`X` `k ØfXY`i bgYf`6i W\`]a a Yf`ni ``YhnhYfYa fUhYbž`i bX`k]f`bY][hYb`XUni ž`gY]bYa `FUh`ni `Zc`[Yb"

I bgYfY'FY]gY'bUWX'?UgWXa]f'k Uf'a Ò[`]WXYfk Y]gY'Ui WX'gWX`YWXh VYfUhYb"'K]f'\UhhYb'i bg'Ui Z'X]Y'Ni g]WXYfi b[Yb'Y]bYg'FY]gYVØfcg]b'8Y`\]'j Yf`UggYbž'XUgg'Y]b'6Ygi WX']b'CfXbi b['gY]ž'UVYf'k]f\UVYb'X]Y'[UbnY'NY]h'ØVYf'_Y]bYb'Y]bn][Yb'UbXYfYb'Hci f]ghYb[YgY\Ybž'i bX']WX'Yf]bbYfY'a]WX'XYi h']WX'Ub'U``X]Y'YI d`cX]YfhYb6fØW_Ybž'7\YW_dc]bhgž'A ÀbbYf'a]h'K UZZYb'i bX'U``[Ya Y]bYg; YZØ\`ž'b]WXh'VYgcbXYfg'g]WXYf'ni 'gY]b"

'U`h1 < Ui gVcchY'Ui Z'XYa '8 U`!GYY']b'? UgW\a]f 2 HUddUgUb D\i f]gUa f]h#G\i hhYfghcW_'< Ui gVcchY'Ui Z'XYa '8 U`!GYY

$K Y W Y F Y g Y a OW h Y b G Y k Y Y Y f \ c Y b 3$

⇒W. 'k ØfXY'[YfbY'bUW\BYdU`ni fØW__Y\fYbž'Ua 'VYghYb'X]Yga U`c\bY'A U[Yb_fÀa dZY"'→W. 'Yf]bbYfY'a]W\ž'XUgg']W\'X]Y'6Yf[Y'Xcfh VYhfUW\hYhY'i bX'XUW\hYž'XUgg'Yg'ZUgh'Y[U`'k ÀfYž'k Ybb']W\'Ua bÀW\ghYb'HU['ghYfVYb'k ØfXYž'k Y]`']W\'Yhk Ug'gc'I b[`Ui V`]W\Yg [YgY\Yb'\UhhY"'J]Y`Y'→J\fY'gdÀhYf'\Uhig]W\'X]YgYg'6]`X']a a Yf

'U`h1 Fcn'K Uh_]bg']b'BYdU` 2Fcn'K Uh_]bg'Fcn'K Uh_]bg']b'BYdU`
UV[YV]`XYh

< UVYb 'G]Y 'bcW\ 'Y]b 'HfUi a n]Y`ž'XUg'G]Y 'bcW\ 'b]W\ h [YgY\Yb'\UVYb3</pre>

#W 'k i fXY']b' #DX]Yb'j cb'Y]bYa 'BUg\cfb'[Y'U[h'fi bX'k]f'Zc`[hYb Y]b][Yb'nk Y]ZY`\UZhYb'F UhgW\`A[Yb'j cb'9]b\Y]a]gW\Yb'\]Yf' ']a N]W_nUW_'`Ui ZYb'i bX'Ui Z'Y]bYb'6Ui a '_`YhhYfb' '\a a Łž'UVYf']W\ k Uf'bcW\'b]Y']f[YbXk c']b'5Zf]_U'Ui Z'Y]bYf'GUZUf]"' #W\'`]YVY'Ygž H]YfY']b'ZfY]Yf'K]`XVU\b'ni 'gY\Ybž'U`gc']gh'X]Yg'Y]b'HfUi a ž j cfUi g[YgYhnhž']W\'_ObbhY'Yg'Ui Z'Y]bY'K Y]gY'hi bž'X]Y'XYb'H]YfYb i bX'XYf'`c_U`Yb'; Ya Y]bgW\UZh'ni [i hY'_ca a h"

G]bXG]YDUbYfCXYfGWUii gh][Yf3

 $\begin{array}{l} + W \cdot (VY \cdot VY) \times Yg^{-}[Ya \quad UW \cdot h'' + b \cdot XYf^{-}J \quad Yf[Ub[Yb \setminus Y]h \dot{z}^{-}U \cdot g^{-}]W \cdot j]Y \cdot NY]h \\ (UhhY \dot{z}^{-}k \quad Uf^{-}]W \cdot Zfc \cdot \dot{z}^{-}VY] \cdot XYf^{-}D \cdot Ubi \quad b[\quad c W_Yf^{-}ni \quad gY]b \dot{z}^{-}UVYf^{-}Yg^{-} \cdot Uh \\ (ni \quad Y]b][Yb \cdot __b Udd Yb \cdot F Ugi \quad fYb \cdot i \quad b \times J \quad cfZ \dot{a} \cdot Yb \cdot [YZ\emptyset \setminus fh \dot{z}^{-}]b \cdot XYb Yb \cdot]W \\ (Ub \cdot b)[W \cdot h^{-}]XYU \cdot Yb \cdot C \quad fh Yb \cdot [YgW \cdot UZYb \cdot \setminus UVY \cdot fg]Y \setminus Y \cdot i \quad bh Yb \cdot L'' \rightarrow h h h \cdot V]b \\ (W \cdot Y \setminus Yf^{-}Y)[b \cdot ZYI][V \cdot Yf^{-}D \cdot Ub Yf''] \end{aligned}$

< chY``cXYf`< cghY``fcXYf`7Ua d]b[&3

K]f`\UVYb`Ui Zi bgYfYf`[fc» Yb`FY]gY`Ub`Y]b][Yb`gW\cW_]YfYbXYb CfhYb`ØVYfbUW\hYhž'hY]`k Y]gY`Ui Z[fi bX`i bgYfYg`6i X[Yhg'j cb') \$ DZ bX`dfc`K cW\Y`]b_`i g]j Y"`K]f`ØVYfbUW\hYhYb`j YfgY\Ybh`]W\`]b Y]bYa `6cfXY```]b`?i U`U`@ a di fž'k UW\hYb`]b`Y]bYa `<cghY``]b ♣XcbYg]Yb`a]h`Y]bYa `bUW_hYb`A Ubb`]a `6Yhh`Ui Zi bX`gW\`]YZYb c\bY`NY`h`XfUi » Ybž'k À\fYbX`K]`XgW\k Y]bY`i a `i bgYfYb 7Ua d]b[d`Uhn`\Yfi a a UfgW\]YfhYb"`5`gc`\UVY`]W\`Yhnh`Y\Yf`Y]bY Jcf`]YVY`ZØfY]b`gW\ÒbYg`6Yhh`]b`Y]bYa `Y][YbYb`N]a a Yfž'cVk c\`Yg`b]W\hi bVYX]b[h`bcVY``gY]b`a i gg°

$K Ug^k Uf^+ \uparrow f^k Wh][ghYg^FY]gYYf^YVb]g3$

⇒W. ``]YVY `Y]bY ii bYfk UfhYhY '6Y[Y[bib['a]h'H]YfYb"'K]f'a UWW hYb
Y]bY '6cchgZU\fh'ni 'Y]bYf' ≠bgY `'j cf'XYf'? ØghY 'A U`Umg]Ug'i bX
a Y\fYfY 'Yhk U'nk Y] 'A YhYf ``Ub[Y'K UfUbY'_Ua Yb'Ui g'XYa 'K U`X
Ub'XYb 'GhfUbX'i bX'k c``hYb'i bgYfY 'GUbXk]WWYg"'CVk c\``Yg'Y]b
_`Y]bYf'A ca Ybh'k Ufž'k Uf'Yf'gc'ØVYffUgWWYbX'i bX'k i bXYfVUfž
XUgg']WW ']\b'b]Y'j Yf[YggYb'\UVY"

'U`h1 CfUb[!! hUbg'g]bX'Ui Z'6cfbYc'i bX'Gi a UhfU'ni
Z]bXYb 2 M gb]nUa 'M gcZ#G\i hhYfghcW_'CfUb[!! hUbg']b'Gi a UhfU
k Uf'ZØf'Fcn'Y]b'Hcd!FY]qYYf`YVb]q

#W. 'k Uf'Ui WX 'gY\f'[YfbY']b'Y]bYa 'CfUb[!I hUb!
FY\UV]`]hUh]cbgnYbhfi a 'Ui Z'Gi a UhfU"' #WX '_Ubb'a]f']a a Yf'bcWX
Y]bYb'CfUb[!I hUb']b'XYb'6Ài a Yb'j cfghY``Ybž'XYf'Y]b'f]Yg][Yg
6`Uhh'U`g'FY[YbgWX]fa 'VYbi hnh"'fC_Umž'XUg'k UfYb'nk Y]
9fZU\fi b[Yb"Ł

GWX`]Y»`]WXž'k Ufi a 'fY]gYb3

#W 'XYb_Yž'Yg'`]Y[h']b'i bgYfYb'; YbYbž'Bca UXYb'ni 'gY]bž'i bX'Yg
[]Vh'Y]bY 'ZUgh'i bVYgWkfY]V`]WkY': fYi XYž'Ub'Y]bYa 'bYi Yb'C fh'ni
gY]b'i bX'A YbgWkYb'ni 'hfYZZYbž'X]Y'j Ò``]['UbXYfg'XYb_Yb''8 Ug
; YZØ\`'XYf'9\fZ fWkhž'XUg']f[YbXkc'k]Y']a '<]a U`UmU']b'a]f
Ui Zhf]hhž'\À`h'a]Wk'Xi fWk'gWkk]Yf][Y'NY]hYb'''9g']gh'i bj Yfa Y]X`]Wkž
XUgg'k]f'XUg': `]Y[Yb'Ui Z[fi bX'XYg'?`]a Uk UbXY`g'fYXi n]YfYb
a ØggYbž'XU\Yf']gh'Yg'b]Wkh'_`Ufž'k Ug'X]Y'Ni _i bZh'Vf]b[hž'UVYf
gY`Vgh'kYbb']Wk'`Ub[gUa Yf'i bX'bÀ\Yf'Ub'a Y]b'Ni \Ui gY'fY]gYž
k YfXY']Wk'fY]gYb°</pre>

'U`h1 2

'U`h1 2

@Y]hV]`X. 'HUddUgUb 'D\i f]gUa f]h#G\i hhYfghcW

•

•

8 Y hU]`c

 $6\,Y\,gi\ WX\,Y\,b\,{}^*G\,]Y\,{}^*i\ b\,g\,{}^*Ui\ Z.\,{}^*Y\,]b\,Y\,!\,f\,Y\,]g\,Y\,{}^*X\,Y$