

ia dʻ7Ud]hU`!i bhYfghØhnhY∵? fmdhc!6ÒfgY gYhnhʻ5i gnU\`i b[YbʻUi g

Jc`Uh]`Y`A Àf_hY`i bX`? Àa dZY`a]h; YgW\AZhqdUfhbYfb`ZØ\fhYb ni XYfFØW_ni [gdUi gYžgU[hYN]da YlG]b[Udi fg NYbhfu`VUb 'XYb h'ØVYf'bYi Y'FY[Y`b'ZØf'XYb JYfVfUi WXYfgWXi hn bUWX 8]Y g]b[Udi f]gWXY ?fmdhck À\fi b[gVÒfgY'N]da YI'\Uh'5V\YVi b[Yb $Y]b[YZfcfYbž'kUg'XUfUiZ']bXYihYhz'XUgg'_`Y]bYfY'5_hYifY$]a ² _cgmghYa XYfX][]hU`Yb 5ggYhg]a a YfbcWX a]h @lei]X]hÀhini Aa dZYb \UVYb" + Y]bYa hk]hhYfb 5a A]hhkcWXbUbbhYN]daYIjc`Uh]`YAUf_hVYX]b[ib[YbibX Z]bUbn]Y``Y`DfcV`YaY'jcb; YgW\AZhqdUfhbYfb'U`g; fØbXY'ZØf $gY]bYbGWXf]hhibXk]YXYfChYX]Y^0b[ghYb5iggU[YbXYg]$]b'G]b[Udif'UbqÀqq][Yb'IbhYfbY\aYbq'JUi`X"'N]daYI $qU[hY]bU[YqcbXYfhY5b_\emptysetbX][ib[YqkifXYY]bYf$ GmghYa k Ufhi b['i bhYfnc[Yb 'i bX 'X]Y '6Ybi hnYf'_cbbhYb _Y]bY'HfUXYg'cXYf'HfUbgU_h]cbYb'Ui qZØ\fYb"'5i Z[fi bX Y]bYf?ca V]bUh]cb/Ua d∧Y``]d/

- Jc`Uh]`Y`A Àf_hY`i bX`? Àa dZY`a]h`; YgWX ÀZhgdUfhbYfb
 ZØ\fhYb`ni `XYf`FØW_ni [gdUi gYž`gU[hY`N]da YI
- G]b[Udi fg:NYbhfU`VUb_:XYb_h:ØVYf:bYi Y:FY[Y`b:ZØf:XYb JYfVfUi WXYfgWXi hn:bUWX

8]Y'g]b[Udif]gWXY'?fmdhck À\fi b[gVÒfgY'N]da Yl'\Uh 5V\YVi b[Yb'Y]b[YZfcfYbž'k Ug'XUfUi Z'\]bXYi hYhž'XUgg'_`Y]bYfY 5_hYi fY']a '2 _cgmghYa 'XYf'X][]hU`Yb'5ggYhg']a a Yf'bcWX'a]h @lei]X]hÀh'ni '_Àa dZYb'\UVYb"

±b`Y]bYa `hk]hhYfb`5a `A]hhk cW\`bUbbhY`N]da Yl 'j c`Uh]`Y
A Uf_hVYX]b[i b[Yb`i bX`Z]bUbn]Y``Y`DfcV`Ya Y`j cb
; YgW\ÀZhgdUfhbYfb`U`g`; fØbXY`ZØf`gY]bYb`GW\f]hh'i bX`k]YXYf\c`hY
X]Y`^Øb[ghYb`5i ggU[Yb`XYg`]b`G]b[Udi f`UbgÀgg][Yb
I bhYfbY\a Ybg`JUi`X"

N]da YI 'gU[hY ']b 'U'[YgcbXYfhY '5b_ØbX][i b['Yg'k i fXY'Y]bYf GmghYa k Ufhi b['i bhYfnc[Yb 'i bX'X]Y '6Ybi hnYf'_cbbhYb'_Y]bY HfUXYg'cXYf'HfUbgU_h]cbYb'Ui gZØ\fYb"

5i Z[fi bX'Y]bYf?ca V]bUh]cb'j cb'l a ghÀbXYbž'X]Y'g]W\
i bgYfYf'?cbhfc``Y'Ybhn]Y\Ybž'XUfi bhYf'j c`Uh]`Y
A Uf_hVYX]b[i b[Yb'i bX'X]Y'XUfUi g'fYgi `h]YfYbXYb
Z]bUbn]Y``Yb'GWk]Yf][_Y]hYb'i bgYfYf'k]Wkh][ghYb; YgWkÀZhgdUfhbYfž'kØfXYb'k]f'5i gnU\`i b[Yb'V]g'Ui Z
k Y]hYfYg'Ui ggYhnYbž'i a 'X]Y'\DhY[f]hÀh'i bgYfYf'D`UhhZcfa
ni 'k U\fYb"

J Ui `X'_ØbX][hY'5bZUb['\$\ `]'Ub\'55V\YVi b[Yb\'5'< Ub\XY\`i b\X 9]bnU\`i b[Yb'Ui gni gYhnYb"'8]Y':]fa U'gU[hY\'5'g]Y'k YfXY'VY]'XYb; Yf]W\'hYb']b'G]b[Udi f'Y]b'A cfUhcf]i a 'VYUbhfU[Yb\'5'k Ug'Y]b fYW\'h`]W\'Yg'J YfZU\fYb']gh'a]h'\=bgc\'j Ybn'j YfVi b\XYb"'8]Y?i b\XYb[Y\`XYf'j cb'J Ui `X'g]b\X'ZUgh'XfY]'K c\W\Yb'gd\'AhYf']a a Yf bc\W\']b'\XYf'G\W\k YVY"

N]da YI 'k i fXY'&\$%, '[Y[fØbXYh'i bX'k c``hY'ni `Yhnh'gY]bY'DfÀgYbn]b'GØXcghUg]Yb'Ui gVUi Yb"'9g'\Uh'VYfY]hg'B]YXYf`Uggi b[Yb']b G]b[Udi fž'H\U]`UbXž'5i ghfU`]Yb'i bX' \DXCbYg]Yb"'8Ug <UbXY`gj c`i a Yb'Ui Z'N]da YI ']b'XYb'`YhnhYb'&('Ghi bXYb'YffY]W\hY`Ui h'6]hWc]b'HfUXYf'- 'A]``]cbYb'I G!8c``Uf'7c]b; YW_c'8UhYb"

 $8 \ Ug'l \ bhYfbY\ a \ Yb'\ Uh'V]g\ Yf'ZUgh'*' \ A \]``]cbYb'l \ G!8c``Uf'Ub : \]b \ Ub \ na \]hhY`b'Ui \ Z[\ YVfUW\ h'' \ 7fi \ b \ W \ VUgY!8 \ UhYb \ nY][\ h'Ub''8]Y `YhnhY'Fi \ bXY'k i fXY']a \ \Rightarrow b]'X]YgYg'$U\ fYg'j \ cb'7c]b \ VUgY \ Ub[\ YZØ\ fh'''7c]b \ VUgY'\ UhhY'Ub[\ YV`]W\ k \ c``hY'XUg'l \ bhYfbY\ a \ Yb \ ØVYfbY\ a \ YbžYb \ hgW\]YX'g]W\ UVYf'ghUhhXYggYb'ZØf'Y]b Y ghfUhY[]gW\ Y'$b' Ygh]h]cb''$

Ni 'XYb'VYghY\YbXYb' \pm j YghcfYb'[Y\ÒfYb'6'7Ud]hU'ž'A]bXK cf_g 7Ud]hU'ž' \pm bZ]b]hm'6'cW_WXU]b' < c'X]b[g'i bX' \Rightarrow a d'7Ud]hU'ž'j cb XYbYb''YhnhYfY'@98'gY]bY'*!A]'']cbYb!8c''Uf!:]bUbn]Yfi b[gfi bXY]a 'j Yf[Ub[YbYb' \Rightarrow Ubi Uf"

8]Y`NYbhfu`VUb_'jcb'G]b[Udif'\Uh'bYiY

JYfVfUiW\YfgW\ihnaU»bU\aYb'Yfkc[Ybž'bUW\XYa'ghØfa]gW\Y

AÀf_hY'X]Y'?ibXYb'XUfUb'[Y\]bXYfh'\UVYbž']\f';Y`X'UVnifiZYb"

8Yf';YgW\ÀZhgZØ\fYf'XYf'6Ub_ž'FUj]'AYbcbž'gU[hY'Ua'8]YbghU[ž

XUgg'XYf'GhUXhghUUh'cZh'U`g'ZØ\fYbXY'8fY\gW\Y]VY'ZØf'X][]hU`Y

JYfaÒ[YbgkYfhY'a]h'_`UfYf'FY[i`]Yfib['Ub[YgY\Yb'kYfXYž'UVYfkY]hYfY']VYfdfØZib[Yb'YfZcfXYf`]W\gY]Yb"

_ VYfdfØZ b[Yb'i bX'ÒZZYbh`]W\Y'?cbgi `hUh]cbYb'nk]gW\Yb
]bhYfbUh]cbU`Yb'GhUbXUfX]g]Yfi b[g[fYa]Yb'i bX
FY[i`]Yfi b[gVY\ÒfXYb'g]bX']a'; Ub[Yži a 'X]Y'FY[i`]Yfi b[']b
X]YgYb'6YfY]W\Yb'ni 'gh\Af_Yb ž'Yf'[YgU[h'Y]bY'DfYggY_cbZYfYbn"
A 5G'f\AcbYhUfm'5i h\cf]hm'cZ'G]b[UdcfYŁ'VYUVg]W\h][hz']b'XYb

bàWkghYb'AcbUhYb'ØVYf'jcf[YgWk`U[YbY'AU»bU\aYb'niVYfUhYb"

 $\label{eq:condition} $$ < c`Yb`G]Y`g]WX`^YXYb`5VYbX`X]Y`VYghYb`? fmdhc! $$ BYi][_Y]hYb`ibX`9f_Ybbhb]ggY`XYg`HU[Yg`]b`=\fYbDcghY]b[Ub["`"$

8 Y hU]`q

6Ygi WXYb G]Y i bg Ui Z _fmdhc!bYk g"Uh