

7GJ i bX 8D. 9]bY bYi Y ŸfU XYf Ni gUa a YbUfVY]h]b G]W h

 $9fZU\backslash fYb G]Y\check{z}'k]Y'X]Y'7GJ'Ub[Y_\emptysetbX][hY'AU*bU\backslash aYbia [YgYhnh'\backslash Uh'ibX']\backslash fY'D`AbY'ZØf'X]Y'NigUaaYbUfVY]h'a]hXYa'bYiYb'?cU`]h]cbgdUfhbYf'jcfUbhfY]Vh''9bhXYW_Yb'G]YaY\backslash f'\]Yf''$

H]h`Y. `8]Y '7GJ 'gYhnh'Ui Z'_cbh]bi]Yf`]W\Y 'Ni gUa a YbUfVY]h'a]h'XYf

GY]h'XYf``YhnhYb'DUf`Ua Ybhgg]hni b[']b'@lYa Vi f['VYZ]bXYh'g]W\
X]Y'FY[]Yfi b['k Y]hYf\]b']a '5fVY]hga cXi g''@Ui h'XYa '7GJ!
: fU_h]cbgW\YZ'A UfWGdUi hn'k]fX':]bUbna]b]ghYf';]``Yg'Fch\'Ua
_ca a YbXYb'A]hhk cW\'ØVYf'[Yd`UbhY'GhYi YffYZcfa Yb'ZØf'XUg
*J\f'&\$&) ']bZcfa]YfYbž']bgVYgcbXYfY']b'6Yni ['Ui Z'X]Y
GhYi Yf_`UggY'%U''Ni gÀhn`]W\'k]fX'* gh]na]b]ghYf]b'9`]gUVYh\
A Uf[i Y'5bdUggi b[Yb'Ua 'GhfUZ[YgYhnVi W\']a 'FU\a Yb'XYg
<YYgW\YfhYb 'j cfbY\a Yb''

±0.6Yni ['Ui Z'FYbhYb_Øfni b[Yb'[UV'GdUi hn'VY_Ubbhž'XUgg'V]g\Yf_Y]bY' ±0.7Cfa Uh]cbYb' ØVYf'gc`W\Y'A U» bU\a Yb'gY]hYbg'XYf FY[]Yfi b['j cf`]Y[Yb"'9f'bi hnhY'X]YgY'; Y`Y[Yb\Y]hž'i a 'Ui Z'X]Y [Ygh]Y[YbY'5fa i hg[YZU\f']b'XYb'`YhnhYb' ±1\fYb'\]bni k Y]gYb'i bX VYhcbhY'X]Y'Bchk YbX][_Y]hž'X]YgY'9bhk]W_`i b['ni 'VY_Àa dZYb" 8Yf': Ua]`]Yba]b]ghYf'A UI '<U\b'f8 DŁ'd`Ubh'YVYbZU``g'X]Y J cfghY``i b['Y]bYg'bUh]cbU`Yb'5_h]cbgd`Ubg'ni f 5fa i hgVY_Àa dZ\b'["

8]Y'7GJ'_f]h]g]Yfh'X]Y'j cf\Yf][Y'FY[]Yfi b['ZØf'X]Y'5b_ØbX][i b[ž YXcW\'a Ub[Y\`bXY'I a gYhni b['j cb'Dfc'Y_hYb']a '6YfY]W\ @c[Ya Ybhž'k]Y'VY]gd]Y\`gk Y]gY'XYa '6Ui \UbXj YfhfU[ž'XYf ; fi bXghYi YffYZcfa 'i bX'XYf'GdY_i \Uh]cbgghYi Yf"'=a '; Y[YbgUhn XUni 'VYhcbh'GdUi hn'XUg'9b[U[Ya Ybh'gY]bYf'DUfhY]ž'VYfY]hg Ub[Y_\emptyset bX][hY'Dfc Y_h Y'i a ni gYhnYb"

Ni XYa 'a Yf_hY'GdUi hn'Ubž'XUgg'X]Y'j cf\Yf][Y'FY[]Yfi b[
j YfgÀi a h'\UVYž'5bdUggi b[Yb'Ub'XYf'GhYi YfhUVY``Y
j cfni bY\a Yb"'8]Y'7GJ 'gYhnh'g]W\'\]b[Y[Yb'ZØf'_cbh]bi]Yf`]W\Y
@]YZYfi b['j cb'Ub[Y_ØbX][hYb'A U» bU\a Yb'Y]b"'?f]h]_'f]W\hYh'g]W\
Ui W\'Ub'X]Y'@G5D'ZØf'X]Y'[Yf]b[YfY'5bnU\`'j cb
?fUb_Yb\Ui gVYhhYb'hfchn'k UW\gYbXYf'6Yj Ò`_Yfi b['i bX'Y]bYb
U`Ufa]YfYbXYb'DYfgcbU`a Ub[Y``]a '; Ygi bX\Y]hgVYfY]W\'"8]Y'7GJ
d`Ubh'Y]bY'?Ua dU[bYži a 'a Y\f'\h' b[Y'A YbgW\Yb'ZØf'6Yfi ZY']a
; Ygi bX\Y]hgk YgYb'ni '[Yk]bbYb"

5VgWX`]Y» YbX`Ài » YfhY`g]WX`GdUi hn`VYgcf[h'ØVYf`X]Y`dc`]h]gWXY
5V_Y\f`]b`UbXYfYb`Yi fcdÀ]gWXYb`@ÀbXYfb`i bX`VYhcbhY`X]Y
J YfUbhk cfhi b[`XYf`hfUX]h]cbY``Yb`DUfhY]Ybž`XUg`J YfhfUi Yb`XYf
6Øf[Yf`]b`X]Y`Dc`]h]_`k]YXYf\Yfni ghY``Yb"`9f`a U\bhY`ni f
J Yfa Y]Xi b['j cb`ZU`gWXYb`<cZZbi b[Yb`i bX`GWXf]hhYbž`i a `X]Y
Dc`]h]_j YfXfcggYb\Y]h`ni `VY_Àa dZYb"` `B 5;

8 Y hU]`q

6 Y gi W Y b 'G] Y 'i b g 'U i Z 'b ! U ["X Y