

: U\ffUXi bZU```]b`@i Xk][g\UZYb. FUXZU\fYf'j Yf`Yhnh'g]W\``Y]W\h'VY]a 5VV]Y[Yb

 \pm '@ Xk][g\UZYb'_c``]X]YfhY'Y]b'&+!'\A\f][Yf'FUXZU\fYf'VY]a 5VV]Y[Yb'a]h'Y]bYa '5i hc"'8Yf': U\ffUXZU\fYf'j Yf\YhnhY'g]W\ \ `Y]W\h"

8 Yf Nk]gWX Yb ZU``'YfY][bYhY 'g]WX 'Ub 'Y]bYf'j]Y`VY ZU\ fYbYb?fYi ni b[ž'bÀa `]WX '@U[Yf\ Ui gghfU» Y'i bX '? U]gYfk Òfh\ XUa a ']a GØXYb'j cb'@ Xk][g\ UZYb" 8]Y 'I a ghÀbXY 'XYg'I bZU``g'g]bX fY`Yj Ubhž'XU'g]Y 'Ui Z'X]Y' < YfUi gZcfXYfi b[Yb'\]bk Y]gYbž'a]h'XYbYb F UXZU\ fYf']a 'U``hÀ[`]WX Yb 'GhfU» Ybj Yf_Y\ f'_cbZfcbh]Yfh'g]bX" '8 Yf F UXZU\ fYf'k c``hY'Ui Z'X]Y': U\ fVU\ b'k YWX gY`bž'i a '`]b_g UVni V]Y[Ybž'U`g'Yf'a]h'Y]bYa '5i hc'Y]bYg'+'! 'À\ f][Yb'A UbbYg ni gUa a Ybgh]Y» "'8]YgY'5fh'XYf'? c``]g]cb']gh'`Y]XYf'b]WX h i b[Yk Ò\ b`]WX'i bX'j YfXYi h`]WX h'X]Y'B chk YbX][_Y]h'ZØf'Y]bY VYggYfY'J Yf_Y\ fgg]WXYf\Y]h"

8 Y hU]`gʻni a 'J c f ZU``

 $8]Y `Dc`]nY] `` Uhi]b'] `fYf'6Yf] WA hYfghUhhi b['__`Uf[YghY``hž'XUgg'XYfFUXZU\fYf'VY]a '5VV]Y[Yb'j ca': U\ffUXkY['Ui Z'X]Y': U\fVU\b kYWAgY`hY"'8UVY]'_Ua 'Yg'ni f'?c``]g]cb'a]h'XYa '5i hcž'k Ug gWA`]Y <math>\rangle$ `] WA 'XUni 'ZØ\fhYž'XUgg'XYf'FUXZU\fYf'ghØfnhY'i bX'g] WA

`Y]W\hY`JYf`Yhni b[Yb`ni nc["'9g`]gh`Y]b`6Y]gd]Y`ž`XUg`j]Y`Y
FUXZU\fYf`VYhf]ZZh.`X]Y`I bg]W\Yf\Y]h`VY]a `5VV]Y[Yb`Ub
?fYi ni b[Ybž`k c`\Ài Z]['i b_`UfY`G][bU`Y`i bX`JYf\U`hYbgk Y]gYb`]a
JYf_Y\f`\YffgW\Yb"

8]Y J Yf`Yhni b[Yb XYg`F UXZU\fYfg`gWXY]bYb`[`ØW_`]WXYfk Y]gY
b]WXh`[fUj]YfYbX`ni `gY]bž`XYbbcWX`V`Y]Vh`XYf`J cfZU```Y]b`k]WXh][Yg
H\Ya U`ZØf`X]Y '^2 ZZYbh`]WX_Y]h" '9]bY '9f\Ò\i b[`XYf`G]WXYf\Y]h`ZØf
F UXZU\fYfž`]bgVYgcbXYfY`Ub`_f]h]gWXYb`?fYi ni b[Ybž`_ÒbbhY\Y`ZYbž`ni _ØbZh][Y`I bZÀ``Y`ni `j Yfa Y]XYb" '8]Y`Dc`]nY]`gWXÀhnh`XYb
GUWXgWXUXYb`Ui Z`Yhk U`) \$\$ '9i fcž`Y]bY`Gi a a Yž`X]Y`ZØf`j]Y`Y
J Yf_Y\fghY]`bY\a Yf`YVYbZU``g`j cb`6YXYi hi b[`]gh"

8]Y'l a ghÀbXY'i bX'X]Y'5fh'XYg'l bZU``g'k YfZYb'Y]b][Y': fU[Yb'Ui Z K]Y'_ÒbbYb'k]f'X]Y'G]W\Yf\Y]h'ZØf'FUXZU\fYf'j YfVYggYfb3'K Y`W\Y A U» bU\a Yb'g]bX'bchk YbX][ž'i a 'gc`W\Y'?c``]g]cbYb'ni j Yf\]bXYfb3'8]YgY'i bX'UbXYfY': fU[Yb'g]bX'YbhgW\Y]XYbXž'i a 'Y]bg]W\YfYg'A]hY]bUbXYf']a 'GhfU» Ybj Yf_Y\f'ZØf'U``Y J Yf_Y\fghY]`bY\a Yf'ni '[Yk À\f`Y]ghYb"

9g'V`Y]Vhini `\cZZYbž'XUgg'X]YgYf'JcfZU```]b'@ Xk][g\UZYb'b]W\h'bif U`g'9]bnY`ZU```VYhfUW\hYh'k]fXž'gcbXYfb'U`g'7\UbW'ZØf'Y]bY i a ZUggYbXYfY'8]g_i gg]cb'ØVYf'X]Y'JYf_Y\fgg]W\Yf\Y]hii bX'XYb GW\i hn'j cb'F UXZU\fYfbž'X]Y'ni bY\a YbX'HY]`'XYg'i fVUbYb JYf_Y\fg'g]bX"'

8 YhU]`q

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