

i [YbXZi » VU``hYUa 'Ui g'BYi a Uf_h']b 6Yf`]b'ØVYfZU``Yb' '6YhfYi Yf'j Yf`Yhnh°

i bX'Gd]Y`Yf'j Yf`Yhnhž'Dc`]nY]'Yfa]hhY`h'k Y[Yb'FUi VYg'i bX ? OfdYfj Yf`Yhni b["

FcgYbh\U`Yf`GhfU» Yž'%\$%+, '6Yf`]bž'8Yi hgW\`UbX'!'9]bY

\$\frac{1}{2}\text{VbXZ}\text{Z}\text{VU}``a UbbgW\UZh'Ui g'XYa '@UbX_fY]g'BYi a Uf_h']b'XYf

CVYfdZU`n'k i fXY']b'XYf'BUW\h'ni a 'GcbbhU[']b'6Yf`]b'N]Y`'Y]bYg

Vfi hU`Yb'5b[f]ZZg"'@Ui h'db"XY'YfY][bYhY'g]W\'XYf'JcfZU``'Ui Z'XYf

FcgYbh\U`Yf'GhfU\text{Y}\'Yf\']b'6Yf`]b!A]hhYž'U`g'X]Y'A UbbgW\UZh'Ui Z'XYa

KY['ni ']\fYf'I bhYf_i bZh'k Uf"'6Y]'XYa '\text{VYf}[f]ZZ'k i fXYb'a Y\fYfY

DYfgcbYb'j Yf`Yhnhž'XUfi bhYf'XYf'6YhfYi Yf'XYf'A UbbgW\UZhž'XYf']a

?fUb_Yb\Ui g'VY\UbXY`h'k YfXYb'a i gghYž'gck]Y'Y]b'Gd]Y`Yf'i bX

Y]b'NYi [Y"

8Yf; Yk U`hU_h'k i fXY'Xi fW\'Y]bYb'GhfY]h'a]h'Y]bYf'UbXYfYb

i [YbX[fi ddY'Ui g[Y`Ògh"'9]b'%+!À\f][Yf'VYXfc\hY'XYb

&\$!'À\f][Yb'6YhfYi Yfž'k Ug'gW\`]Y»`]W\'XUni 'ZØ\fhYž'XUgg'X]YgYf

j cb'Y]bYa '%(!À\f][Yb']bg'; Yg]W\h'[YgW\`U[Yb'k i fXY"'=\b'XYf

XUfUi ZZc`[YbXYb'9g_U`Uh]cb'Zc\'X]Y': i » VU``a UbbgW\UZh']b

j YfgW\]YXYbY'F]W\hi b[Ybž'YXcW\'[Yf]Yh'Y]b'%(!'À\f][Yf'Gd]Y`Yf

YfbYi h']b'X]Y': Àb[Y'XYf'5b[fY]ZYf"

5b[fY]ZYf'i bX'JYf`YhnhY

8] Y 'ZØb Z'5 b [fY] ZY f 'ØV Y fk À `h] [hY b 'X Y b ' 1 b [Y b 'Gd] Y `Y f ž 'g W i V g hY b] \ b 'ni '6 c X Y b 'i b X 'f Ui V hY b '] \ b 'Ui g ž 'k À \ fY b X 'g] Y '] \ b 'hf UhY b 'i b X g W \ `i [Y b " '9] b '' +! 'À \ f] [Y f 'A Ubb ž X Y f 'U `g 'N Y i [Y 'ni b À W g h Y] b [fY] ZY b 'k c ``hY ž k i f X Y 'Y V Y b Z U ``g 'V Y X f c \ h" '9] b 'k Y] hY f Y f 'N Y i [Y ž Y] b '&\$! 'À \ f] [Y f ž 'j Y f Z c `[hY 'X Y b '% +! 'À \ f] [Y b '5 b [fY] Z Y f 'i b X '\] Y `h'] \ b

ZYghž'k i fXY'YXcW\'YVYbZU``g'j Yf`Yhnh' 'X]Yga U``Ua '?b]Y' 'j cb Y]bYa 'I bVY_UbbhYb"'6Ygcf[b]gYffY[YbX']gh'Ui W\'X]Y'HUhgUW\Yž XUgg'XYf'%+!À\f][Y'kÀ\fYbX'XYg', VYf[f]ZZg'Y]bY'hÀi gW\YbX'YW\h k]f_YbXY'GcZhU]f!K UZZY'VY]'g]W\'hfi["

8]Y'Dc`]nY]'\Uh'X]Y'9fa]hhi b[Yb'k Y[Yb'j YfgWk]YXYbYf'8Y`]_hY Y]b[Y`Y]hYhž'XUfi bhYf'FUi Vž'? ÒfdYfj Yf`Yhni b[ž'6YXfc\i b['i bX Y]b'JYfghc» '[Y[Yb'XUg'K UZZYb[YgYhn"8Yf'JcfZU``'k]fZh'Y]b GWk`U[`]Wkh'Ui Z'X]Y'ni bY\a YbXY'; Yk U`h'i bhYf'¾ [YbX`]WkYbž'Y]b H\Ya Už'XUg']b'8Yi hgWk`UbX']a a Yf'a Y\f'Ub'6YXYi hi b['[Yk]bbh"

<]bhYf[fi bX ni f i [YbX_f]a]bU i]hÀh

K]Y 'X]Y 'X ']"XY 'ZYghghY ``hž'nY][Yb 'U_hi Y ``Y 'GhUh]gh]_Ybž'XUgg'X]Y
\$\delta [YbX_f]a]bU`]h\dangle hi]b 'XYb ``YhnhYb '\dangle fYb '[Ygh]Y[Yb ']gh" '\dangle j]Y `Yb
\$\dangle \dangle x '5[[fYgg]cb 'i bX'; Yk U`hi bhYf'\dangle [YbX`]W\Yb 'XUg
FYgi `hUh'j cb 'gcn]U`Yb 'GdUbbi b[Yb 'i bX'?cbZ]_hYbž'X]Y ']b 'XYf
fYU`Yb 'K Y`h'cXYf'Ui W\ '\ØVYf'gcn]U`Y '\dangle YX]Yb 'Ub[Yghc\angle Yb 'k YfXYb"
Gc`W\Y'JcfZ\dangle x 'Y'j YfXYi h`]W\Yb 'X]Y '\dangle f]b[`]W_Y]h\dangle df\dangle j Ybh]j Y
A U\angle bU\a Yb 'ni 'Yf[fY]ZYb\dangle i a '\dangle [YbX`]W\Yb'[Yk U`hZfY]Y
?cbZ]_h`Oqi b[Yb 'b\dangle \Yfni Vf]b[Yb"

8 YhU]`g	
JcfZU``	FUiVž?ÒfdYfjYf`Yhnib[ž6YXfc\ib[žKUZZYbj
	Yf[Y\Yb
I fgUWX Y	GhfY]h
Cfh	FcgYbh\U`Yf`GhfU»Yž'%\$%+, '6Yf`]bž
	8 Ying W. `Ub X
J Y f`Y hn hY	
: YghbU\a Yb	%

8 YhU]`g	
EiY``Yb	• k k k "dbd"XY
	• k k k "X′]"XY

6 Ygi WX Yb 'G]Y 'i bg 'Ui Z. 'b!U["X Y