

K]`XYg\Ui gYf]b'j cf'; Yf]W\h. Gi Vj Ybh]cbgVYhfi ['i a '7cfcbU! <]`ZYb'

9]bY'(*!'À\f][Y'K]`XYg\Ui gYf]b'ghY\h'j cf'; Yf]W\h'k Y[YbGi Vj Ybh]cbgVYhfi [g'Xi fW\'7cfcbU!<]`ZYb/'XUg'J YfZU\fYbYbXYh'a]h'Y]bYf'; Y`XUi Z'U[Y"



K]`XYg\Ui gYbž'8Yi hgW\`UbX'!'9]bY'(*!'À\f][Y': fUi 'Ui g K]`XYg\Ui gYb'ghY\h']a 'NYbhfi a 'Y]bYg'GhfUZJ YfZU\fYbg'k Y[Yb Gi Vj Ybh]cbgVYhfi [gž'bUW\XYa ']\f'@UXYb'Ui Z[fi bX'XYf'7cfcbU! DUbXYa]Y']a '8YnYa VYf'&\$&%'gW\`]Y» Yb'a i gghY'''@Ui h'K YgYf! ?i f]Yf'k Uf'XYf'8YnYa VYf'bcfa U`Yfk Y]gY'XYf'i a gUhnghÀf_ghY A cbUh'ZØf']\f'; YgW\ÀZhž'XcW\'X]Y'DUbXYa]Y'gYhnhY']\f'Yf\YV`]W\ni "

Jcf:XYf:GWX`]Y»ib[:\UhhY:X]Y:5b[Y_`U[hY:ia ZUb[fY]WXY:JcffÀhY
ZØf:X]Y:Yfk UfhYhYb:Ia gÀhnY:ibX:gU\:g]WX:[Ynk:ib[Ybž
FYWXbib[Yb:ni:VY[`Y]WXYb":5iZ:XYf:GiWXY:bUWX:<]`ZY:k UbXhY:g]Y
g]WX:Ub:]\fY:GhYiYfVYfUhYf]bž:X]Y:g]Y:ØVYf:ghUUh`]WXY:<]`ZYb
]bZcfa]YfhY":\D:X]YgYa:NigUa a Yb\Ub[:VYUbhfU[hY:g]Y:X]Y

gc[YbUbbhY: 8YnYa VYf\]`ZY i bX'Yf\]Y`h'Y]bY'l bhYfghØhni b[']b < Ò\Y'j cb'+- %ž * '9i fc"'5``YfX]b[g'k i fXY']\f'bUW\hfÀ[`]W\a]h[YhY]`hž'XUgg'g]Y'XUZØf'_Y]bYb'5bgdfi W\`\UhhYž'XU']\f'@UXYbb]W\h']a 'Bcj Ya VYf'[YgW\`cggYb'[Yk YgYb'k Uf"

GhfUZj YfZU\fYb i bX 9bhgWX Y]Xi b['XYg; Yf]WX hg

 $B \ UWX \ XYa \ "9f\ U"h"Y]b Yg"F \ \emptyset W_nU\ "ib[gVYgWXY]Xg"k \ Uf"X]Y": fUi[Ynk ib[Ybž'6 \emptyset f[Yf[Y`X'ni `VYn]Y\Yb'ibX'; Y`X'jcb']\fYb''9`hYfb ni ``Y]\Yb"'8]Y "GhUUhgUbk U`hgWX UZh'Yf`]Y "XUfUi Z\]b "Y]b Yb GhfUZVYZY\``k Y[Yb'Gi VjYbh]cbgVYhfi [g"'Hfchn']\fYf'JYfhY]X][ib[ž XUgg'g]Y']b "Y]b Yf B ch`U[Y'k Uf'ibX'_Y]b Y "UbXYfY' <]`ZY "Yf\]Y`hž k if XY "XUg'J YfZU\fYb'YfÒZZbYh"'8]Y "5b[Y_`U[hY'VYhcbhYž'XUgg'g]Y _Y]b Y'6YhfØ[Yf]b 'gY]'ibX'U``Yg']b']\fYf'A UWXh'GhY\YbXY'[YhUb\UVYž'ia']\fYfDZ]WXhYb'ni "YfZØ``Yb"$

FYWXh`]WXYf'FU\a Yb'jcb'GiVjYbh]cbgVYhfi[

 $8 \ Yf': \ U```\ Uh'Ui \ WX \ fYWX \ h`]WX \ Y'=a \ d`]_Uh]cbYbž'X]Y' \ \emptyset VYf'X]Y$ $9]bnY`[YgWX]WX \ hY'XYf'K]`XYg\ Ui gYf]b``\]bUi g[Y\Yb'' Gi \ Vj \ Ybh]cbgVYhfi [ž']bgVYgcbXYfY']a 'F U\a Yb'XYf'7cfcbU!<]`ZYbž']gh'Y]b'YfbghYg'8Y`]_h''@Ui h'`i YXYfg!k UfbYVc`Xh''XY'_Ubb Gi \ Vj \ Ybh]cbgVYhfi ['Ui WX'VY]'i bni fY]WXYbX'Xc_i a Ybh]YfhYb : cfXYfi b[Yb'Yf\YV`]WXY'fYWXh`]WXY'?cbgYei YbnYb'bUWX'g]WX n]Y\Yb''$

$$\begin{split} & \grave{OZZYbh}] \& \& Yb < Ub X \\ & [] \grave{h} "9g "gd] Y \grave{h} _Y] b Y \vdash F c \grave{Y} E c \lor Y \end{bmatrix} b \\ & b U \& [Yk] Y g Y b Y f \vdash G \& U X Y b \vdash Y b h gh U b X / X] Y \vdash 6 Y f Y] h gh Y \grave{h} \vdots b [Y] b Y g \\ & 9] [Yb U b h Y] \grave{g}] gh \backprime Z Ø f \vdash X] Y \vdash \grave{O} f X Y f i b [Y] b Y \vdash n k] b [Yb X Y \\ & J c f U i g g Y h n i b ["@Y] gh i b [Yb Z X] Y \vdash c \land b Y \vdash X] Y g Y b \vdash 9] [Yb U b h Y] \grave{h} Y f V f U W \& h k i f X Y b Z g] b X \vdash b] W \& h Z \grave{O} f X Y f Z \& Ug X] Y \vdash f Y W \& h \grave{h} W Y b \vdash F] g] _ Y b \vdash Z Ø f \\ & 5 b h f U [gh Y \grave{h} Y f Y f \land \grave{O} \land h "8] Y g J Y f X Y i h \grave{h} W \land h X] Y \vdash B c h k Y b X] [_Y] h Z Ø f \\ & I b h Y f b Y \land a Y f Z g g] W \vdash [f Ø b X \grave{h} W \land Ø V Y f X] Y \vdash 5 b Z c f X Y f i b [Y b X Y f Y k Y] \grave{h} = (1 + 2) Y g f f Y W \& h \grave{h} W Y b \vdash F U h Y] b n i \land c \Upsilon Y b " \end{split}$$

8 Yf: U``XYf'K]`XYg\Ui gYf]b'i bX'X]Y'XUa]h'j YfVi bXYbYb fYW\h`]W\Yb'FU\a YbVYX]b[i b[Yb'i bhYfghfY]W\Yb'X]Y < YfUi gZcfXYfi b[Ybž'j cf'XYbYb'j]Y`Y'k À\fYbX'XYf'DUbXYa]Y ghY\YbXYb'I bhYfbY\a Yf'Ub[Y`Ub[h'g]bXž'i bX'X]Y'?ca d`YI]hÀh XYf'F]W\h`]b]Yb'ni '7cj]X!%-!<]`ZYb'': Øf'j]Y`Yž'X]Y'Ui Z'ghUUh`]W\Y I bhYfghØhni b['Ub[Yk]YgYb'g]bXž'V`Y]Vh'X]Y'_cffY_hY 5bhfU[gghY``i b['i bX'DZY[Y'XYf'8c_i a YbhUh]cb'j cb YbhgW\Y]XYbXYf'6YXYi hi b[''

| 8 YhU]`g | |
|------------|--|
| J c f ZU`` | 6Yhfi [|
| Cfh | K]`XYg\UigYbž'8YihgW\`UbX |
| EiY``Yb | k k k "k YgYf!_i f]Yf"XY |
| | `i YXYfg!k UfbYVc`Xh"XY |
| | • k k k "ghfY]Z`Yf"XY |

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