

@c_ca ch]j Y` GW\k UfnY`⇒\`Y `n]Y\h`]bg`HYI h]`a i gYi a `: cfgh <]ghcf]gW\Yf`I a ni ['ni f`: Y]Yf`j cb`%' \$`⇒J\fYb 9]gYbVU\b[YgW\]W\hY"



8]Y' GWk UfnY' Y' a i gg']b'Y]bYa 'hfc W_YbYbž'[YY][bYhYb; YVÀi XY'i bhYf[YVfUWkh'k YfXYbž'k Yg\U`V'XUg'HYI h]`a i gYi a 'X]Y]XYU`Y'bYi Y' < Y]a Uh'XUfghY``h'' <]Yf'Yf\À`h'X]Y'@c_ca ch]j Y'Y]bYbGcbXYfd`Uhn']b'XYf'bYi '[YghU`hYhYb'@c_\U``Y'i bX'k]fX'HY]`'XYf8Ui YfUi gghY``i b["BYVYb'XYf'@c_'k]fX'Ui Wk'a i `h]a YX]U`YgAUhYf]U`'ØVYf'XUg'; `Y]gbYhn'i bX'XYb'6Yhf]YV'XYf'GhUXhY]gYbVU\bdfÀgYbh]Yfhž'XUg'X]Y'6Ygi WkYf']b'X]Y'; YgWk]WkhY'X]YgYf'k]Wkh][YbHfUbgdcfhj YfV]bXi b['Y]bZØ\fh'

9]b 'GhØW_'; YgWX]WX hY 'k]fX ``YVYbX][

9bXY'XYg'%- "'*J\f\i bXYfhg'k Uf': cfgh'Y]b'VYXYi hYbXYf'GhUbXcfh XYf'HYI h]`]bXi ghf]Yž']b'XYa 'a Y\f'U`g'' \$\$'6Yhf]YVY'UbgÀgg][k UfYb"'8]Y'GhUXhY]gYbVU\b'ØVYfbU\a '%, -' 'XYb'HfUbgdcfh'j cb Fc\ghcZZYb'ni 'XYb': UVf]_Ybž'k cXi fW\'DZYfXYZi\fk Yf_Y ni bY\a YbX'YfgYhnh'k i fXYb"'8]YgY': cfa 'XYg'HfUbgdcfhg'YbXYhY%-*) ž'U`g'@Ughk U[Yb'X]Y'5i Z[UVY'ØVYfbU\a Yb"'8]Y'@c_ca ch]j Yk i fXY'UbgW\`]Y»YbX'*\$'\J\fY']a 'JYf_Y\fga i gYi a '8fYgXYb Ui ZVYk U\fh'i bX'_Y\fhY'j cf'%' '\J\fYb'U`g'8Ui Yf`Y]\[UVY'bUW\: cfgh'ni fØW_"

J]Y`ZÀ`h][Y`DfÀgYbhUh]cbiibX`\c\Y 6Ygi WXYfnU\`Yb

Ni f': Y]Yf'k i fXYb'Y]bY': YghgW\f]Zh'i bX'Y]bY'5i gghY``i b['a]h GW\Ui hUZY`b'i bX': UfVUi ZbU\a Yb'XYf' \(\frac{1}{2}\) Y 'df\(\frac{1}{2}\)gYbh]Yfh" Ni gW\Ui Yf'_cbbhYb'Ui W\':]`a j cfZ\(\text{\$\sigma}\)fi b[Yb']a 'G]hni b[ggUU`'XYf : fY]k]``][Yb': Yi Yfk Y\f'Yf`YVYb\(\frac{1}{2}\)X c\``Hf]\(\frac{1}{2}\)`a Y'U`g'Ui W\ 5a UhYi fUi ZbU\a Yb'VY]b\U`hYhYb": Øf'XUg``Y]V`]W\Y'K c\``XYf 6Ygi W\Yf'gcf[hY'XYf'Ai gYi a gj YfY]b'a]h'; Y[f]``hYa ž'? UZZYY'i bX ?i W\Ybž'k À\fYbX'Y]b' ¾ `Y !HfUV]'Xi fW\'X]Y'; Y[YbX'Zi \f'i bX'Y]b i bhYf\U`hgUa Yg'FU\a Ybdfc[fUa a 'Vch"

8]Y' GWk UfnY' X' Y' fYdfÀgYbh]Yfh'b]Wk h'bi f'X]Y']bXi ghf]Y' Y
J Yf[Ub[Yb\Y]h'XYf'FY[]cbž'gcbXYfb'Ui Wk'X]Y' = XYbh]hAh'XYf'GhUXh
: cfgh" A]h'XYf'5b_i bZh']a 'HYI h]`a i gYi a 'k]fX'ni _ØbZh]['XUg
6Yk i gghgY]b'ZØf'X]Y'`c_U'Y'; YgWk]Wk hY'i bX'X]Y'6YXYi hi b['XYf
9]gYbVU\b'k Y]hYf'[YZÒfXYfh"'9]gYbVU\ba i gYYbž'k]Y'XUg']b': cfghž
gd]Y'Yb'Y]bY'k]Wk h][Y'Fc'Y']b'XYf'6Yk U\fi b['i bX'XYf
J Yfa]hhi b['X]YgYf'_i 'hi fY'Yb'9fVYgž'XU'g]Y'9I dcbUhY'k]Y
GWk]YbYbZU\fnYi [Yž'hYWkb]gWkY'9]bf]Wk hi b[Yb'i bX'\]ghcf]gWkY
8c_i a YbhY'nY][Ybž'X]Y'ni f']bhYfX]gn]d`]bAfYb'?i 'hi f[YgWk]Wk hY
XYf']bXi ghf]Y'Yb'FYj c'i h]cb'VY]hfU[Yb"'Ni 'XYb'VY_UbbhYghYb
9]gYbVU\ba i gYYb']b'8Yi hgWk\UbX'nA\'Yb'VY]gd]Y`gk Y]gY'XUg'
GØXXYi hgWkY'9]gYbVU\ba i gYi a '? Uf`gfi \Y''

8]Y'2 ZZbi b['XYf'bYi Yb'8Ui YfUi gghY``i b['a]h'XYf' GWk UfnYb

i Y ']a 'HYI h]`a i gYi a ']gh'ZØf'5bZUb['C_hcVYf'&\$&) '[Yd`Ubh"

8 Ua]h'k]fX'Y]b'k Y]hYfYg'? Ud]hY``]b'XYf'; YgWk]Wk hY'XYf

Y\Ya U`][Yb'GhUXhY]gYbVU\b'Ui Z[YgWk`U[Yb'i bX'XUg'\]ghcf]gWkY

9fVY'XYf'HYI h]`!'i bX' = Xi ghf]Y[YgWk]Wk hY'XYf'FY[]cb'`YVYbX][
[Y\U`hYb"

8 YhU]`g	
Cfh	:cfghž'8YihgWX`UbX
EiY``Yb	• k k k "fVV&("XY
	• gWX k UfnY!'i `Y"XY

8 YhU]`g	
	XY"k]_]dYX]U"cf[

6 Ygi WX Yb 'G]Y 'i bg 'Ui Z. 'a Y]b!VYf`]b "bYh