

HfUi Yf'i a '@c'6fY]Yf. 'A Y]ghYf'XYf A U[Un]b[YghU`hi b['j YfghcfVYb

@c'6fY]YfžY]b'dfÀ[YbXYf'; fUZ]_XYg][bYf'Ui g'K]Ybž [YghU`hYf]gW\Y'@Y[YbXYb'k]Y' K]YbYf 'i bX' HYa dc ž j YfghcfVYb'Ua'' \$"'\$b]'&\$&)"



K]Ybž'² ghYffY]W '! '5a '' \$"'\$ b] '&\$&) '_Ua 'X]Y 'hfUi f][Y BUW\f]W\h'j cb'@c'6fY]Yfg'ØVYffUgW\YbXYa 'HcX"'8Yf'VYXYi hYbXY; fUZ]_XYg][bYf'i bX'5fh'8]fYWhcf'\]bhYf'`Y[YbX\AfYb'A U[Un]bYb k]Y' K]YbYf 'i bX' HYa dc '\]bhYf`\Aggh'Y]bY'Y]bXfi W_gj c``Y'Gdi f]a '6YfY]W\'; fUZ]_XYg][b'i bX'A YX]Yb[YghU`hi b["'; YVcfYb'k i fXY Yf'Ua '&("'\$Jbi Uf'%-)' ']b'K]Yb'U`g'@cXYk]^_'6fY]Yfž'Yf'k i W\g'U`g Gc\b'Y]bYg'² ghYffY]W\Yfg'i bX'Y]bYg'<c``\AbXYfg'Ui Zž'XYf'XUg _fYUh]j Y'<UbXk Yf_'ZfØ\'ZØf'g]W\'YbhXYW_hY'i bX'XUa]h'Y]b'[Ubn bYi Yg'? Ud]hY`']b'XYf'OghYffY]W\]g\W\Yb'8Yg][bgnYbY'Ui Zg\W`i ["

 $6YfY]hg'k \ \grave{A}\fYbX'gY]bYf'5i gV]`Xi b[`Ub'XYf'; fUd\]gWkYb'@Y\f! i bX'JYfgi WkgUbghU`h']b'K]Yb'Ybhk]W_Y`hY'6fY]Yf'Y]b'h]YZYg JYfgh\grave{A}bXb]g'ZØf'; YghU`hi b['i bX'HYWkb]_"'\#b'XYb'%- +$Yf!\$U\fYb$

$$\label{eq:conditional control of the conditional conditions} \begin{split} &j \ YfX]YbhY \ YfgY]b \ YfghYg \ ; \ Y`X`a \]h`XYa \ `J \ Yf_Ui \ Z'j \ cb \ `a \]! < YbXf]I! \\ &D`U_UhYb \ `U`g`G]YVXfi \ W_ii \ bX`a \ UWX \ hY`g]WX`]b \ `XYf`? fYUh]j \ gnYbY \\ &Y]bYb \ `B Ua \ Yb''`GY]b \ `YfghYf` &V`k \ Uf'VY] \ `XYf`K \ YfVYU[Ybhi f'; ; ? \\ &i \ bhYf`XYf`@Y]hi \ b[\ 'j \ cb' < Ubg`GWXa \]X''`8 \ cfh`VY[Ubb \ Yfž`gY]bY \\ &: \ A`][\ _Y]hYb \ `ni \ 'j \ YfZY]bYfb \ 'i \ bX`dfA[hY`VU`X`XYb \ 'j \]gi \ Y``Yb \ `Gh]` \\ &j \ YfgWX]YXYbYf`Di \ V`]_Uh]cbYb'' \end{split}$$

9]bZi ggfY]WXY'K Yf_Y'i bX'9ffi b[YbgWXUZhYb

6YgcbXYfg'Y]bdfÀ[gUa 'k Uf'gY]bY'5fVY]h'ZØf'XUg'A U[Un]b K]YbYf 'UV'%-, \$ž'XUg'VY_Ubbh'k i fXY'ZØf'gY]bY'h]YZ[fØbX][Yb dc`]h]gWXYb'FYdcfhU[Yb"'A]h']bbcj Uh]j Yb'; YghU`hi b[gY`Ya YbhYbž k]Y'XYa '9]bgUhn'j cb'K Y]» fÀi a Ybž'gYhnhY'Yf'bYi Y'A U» ghÀVY']b XYf'A U[Un]b!8Yg][b!K Y`h"'6fY]Yfg'_fYUh]j Y'J]g]cb'k i fXY gWX`]Y»`]WX'Ui WX'j cb']bhYfbUh]cbU`Yb'A YX]Yb'b]WXh'ØVYfgY\Ybž gcXUgg'Yf'VYfY]hg']b'XYb'%-, \$Yf!\J\\fYb'nU\`fY]WXY'5b[YVchY'Ui g XYa '5i g`UbX'Yf\]Y`h"

%-,) 'nc['Yg']\b'bUW\'<Ua Vi f[ž'k c'Yf'U`g'5fh'8]fYWhcf'ZØf HYa dc 'UfVY]hYhYž'Y]b'A U[Un]bž'XUg'U`g'XYi hgW\Y'5bhk cfh'Ui Z]bhYfbUh]cbU`Y'@]ZYghm`Y!A U[Un]bY'VY_Ubbh']gh''K À\fYbX'gY]bYf NY]h'VY]' HYa dc 'j cb'%-, *'V]g'%--*'UfVY]hYhY'Yf'Yb['a]h'BYj]``Y 6fcXm'ni gUa a Yb'i bX'ZYgh][hY'gY]bYb'Fi Z'U`g'Y]bYf'XYf Y]bZi ggfY]W\ghYb'8Yg][bYf'gY]bYf'NY]h''

8 Ub_'gY]bYf'j]Y`ZÀ`h][Yb'9fZU\fi b[Yb'k i fXY'Yf']b'XYb'%--\$Yf!

\$J\fYb'DfcZYggcf'ZØf'9X]hcf]U`'8Yg][b'Ub'XYf':c`_k Ub[!

<cW\gW\i`Y']b'9ggYb"'6fY]Yf'k Uf'b]W\h'bi f'Y]b'_fYUh]j Yf'?cdZž

gcbXYfb'Ui W\'Y]b'@Y\fYfž'XYf'gY]b'K]ggYb'i bX'gY]bY'@Y]XYbgW\UZh

ZØf'8Yg][b'Ub'X]Y'b\AW\ghY'; YbYfUh]cb'k Y]hYf[UV"'GY]bY'`YhnhYb

\$J\fY'k]Xa YhY'Yf'XYf'; YghU`hi b['ZØf'6]`X'Ua 'GcbbhU['i bX'k Uf

&\$\&\$'a]h'XYa '9\fYbdfY]g'ZØf'gY]b'@YVYbgk Yf_'Ui g[YnY]W\bYh
k cfXYb"

JYfa ÀWX hb]g'i bX'Dfc^Y_hY

@c'6fY]Yf'k Uf'Ub'nU\`fY]W\Yb'Dfc $Y_hYb'VYhY$]`][hž'X]Y'ZØf']\b'j cb VYgcbXYfYf'6YXYi hi b['k UfYb'''8Uni 'nÀ\`h'i bhYf'UbXYfYa 'XUg

]_cb]gWXY'@D!5`Vi a \rightarrow b[Y'FcYa Yf 'j cb': U'Wcž'UVYf'Ui WX 'gY]bY 5i gghY``i b[Yb'k]Y' @c g'<Uk UfU ']b'XYb'<Ua Vi f[Yf 8Y]WX hcf\U``Ybž'X]Y'gY]bY'VYY]bXfi W_YbXYb'5fVY]hYb'Y]bYa VfY]hYb'Di V`]_i a 'j cfghY``hYb"'9f'k Uf'A]h[`]YX'XYg'5fh'8]fYWhcfg 7`i V'f587Ł'i bX'XYg'7fYUh]j '7`i V'5i ghf]Už'k c'Yf'gY]bYf'_fYUh]j Yb @Y]XYbgWX UZh'Ui WX']b'j YfgWX]YXYbYb'9\fYbÀa hYfb'bUWX[]b["

GY]b'9]bZi gg'Ui Z'X]Y'8Yg][bgnYbY'k]fX'b]Wkh'bi f']b'gY]bYb
Y][YbYb'K Yf_Yb'XYi h']Wkž'gcbXYfb'Ui Wk'Xi fWk'X]Y'K]f_i b[ž'X]Y
Yf'Ui Z'gY]bY'Ghi XYbhYb'i bX'?c'`Y[Yb'\UhhY'' 8U'`]Y[h'k Ug'Ub' gY]bY'_fYUh]j Yb'\di hg'i bX'X]Y'5fhž'k]Y'Yf'; YXUb_Yb'ZØf'8Yg][bi a gYhnhYž'k YfXYb'ghYhg'i bj Yf[YggYb'V`Y]VYb''

GY]b'HcX'\]bhYf`Àggh'Y]bY'@W_Y']b'XYf'; fUZ]_XYg][b!7caaib]hmž
XcW\'X]Y'jcb']\a'[YgW\UZZYbYb'K Yf_Y'ibX'X]Y'\dbcjUh]cbYbž'X]Y
Yf'Ub[Yghc»Yb'\Uhž'kYfXYb'UiW\']b'Ni_ibZh'\dgd]fUh]cb'V]YhYb''
6fY]Yfg'@YVYb'nY][hž'k]Y'j]Y'`AUW\h'ibX'9]bZ'igg'; fUZ]_XYg][b'UiZX]Y'; YgY``gW\UZh'\UVYb'_Ubb'ibX'XUgg'Y]bY'[ihY'; YghU`hib[; YgW\]W\hYb'YfnÀ\`h'ibX'XUg'@YVYb'XYf'AYbgW\Yb'VYfY]W\Yfh''

K Y`h'VYf]WX hYh'ØVYf'@c'6fY]Yfg'VYY]bXfi W_YbXY'?Uff]YfY'i bX
gY]b'9fVY']a'; fUZ]_XYg][b'i bX']b'XYf'A YX]Yb`UbXgWXUZh"5i WX
K]_]dYX]U'[]Vh'Y]bYb'gdUbbYbXYb', VYfV`]W_'ni 'gY]bYa '@YVYb
i bX'gY]bYb'@Y]ghi b[Yb"': Øf'+bhYfYgg]YfhY'Ub'XYf'; YgWX]WXhY'XYg
; fUZ]_XYg][bg'V]YhYh'8Yg][bVchY'k Yfhj c``Y'9]bV`]W_Y']b'X]Y
9bhk]W_`i b['X]YgYf'?i bghZcfa"

8 Y hU]`g	
Cfh	K]Ybž ² ghYffY]W
EiY``Yb	• k k k "k Y`h"XY
	XY"a "k]_]dYX]U"cf[
	• XYg][bVchY"Wca

6 Ygi W Yb G]Y i bg Ui Z a Y]b!k]Yb bYh