

6i g\]Xc'd`Uhnh'XYf'?fU[Yb.'Gc'h]W_h'gY]bY :fUi '5bbU!A Uf]U'k]f_`]WX°

6i g\]Xc 'gdf]W\h']a 'Dc XWUgh'ØVYf 'gY]bYb 'F ØW_ni ['Ui g'XYf A i g]_ž'9\Y`YVYb 'i bX'?cbZ]_hY 'a]h'5bbU!A Uf]U"'GdUbbYbXY 9]bV`]W Y 'k UfhYb°



 $6Yf`]b\check{z}`8Yi hgWX`UbX`!`8Yf`VY_UbbhY`6Yf`]bYf`G_UbXU`!FUddYf 6i g\]Xc 'd`Ubh\check{z}'g]WX`gWXf]hhk Y]gY`Ui g`XYa 'A i g]_!6i g]bYgg ni fØW_ni n]Y\Yb\check{z}'i a 'gY]bYb`: c_i g`[Åbn`]WX`Ui Z'gY]b : Ua]`]Yb`YVYb`ni 'f]WX hYb''' <math>\Rightarrow$ 'XYa 'DcXWUgh' \Rightarrow '6Yhh'a]h`5bbU! A Uf]U`i bX`5b]g`: YfWX]WX] '``Aggh'XUg`'9\YdUUf`h]YZ']b`']\f Df]j Uh`YVYb`V`]W_Yb`i bX`hY]`h']bh]a Y`8YhU]`g`Ui g`]\fYa '5```hU["'\\$\\ XYf`U_hi Y``Yb`: c`[Yž`X]Y`Ua '%+"'\\$Jbi Uf`j YfÒZZYbh`]WXh`k i fXYž`ZØ\fh Y]b`H\Ya U`ni 'Y]bYa '\]hn][Yb`GhfY]h`nk]gWXYb`XYb`VY]XYb.`X]Y GhfY]h_i `hi fž`X]Y`g]WX`]a '@Ui Z']\fYf`%(!'`A\f][Yb`6Yn]Y\i b[Ybhk]W_Y`h`\Uh''

=a 'FU\a Yb'XYg'; YgdfÀW\g'_ca a Yb'g]Y'Ui Z'?cbZ']_hY'ni qdfYW\Ybž'X]Y']a a Yf'k]YXYf'nk]qW\Yb']\bYb'YbhqhY\Yb"'9]b nYbhfU`Yg`H\Ya U`]gh`X]Y`9]ZYfgi W\hž`k Ybb`5bbU!A Uf]U`g]W\`ZØf
Y]bYb`5VYbX`gW\]W_`a UW\hii bX`XUg`< Ui g`j Yf`Àggh"`6i g\]Xc
VYhcbhž`XUgg`gY]bY`: fUi `U``Yg`hi b`_Ubbž`k Ug`g]Y`a ÒW\hYž`i bX
gW\]W_hY]bY`_`UfY`6chgW\UZh`Ub`A ÀbbYfž`X]Y`]\fY`DUfhbYf]bbYb
_cbhfc``]YfYb.` 8Ug`[Y\h`Ub`X]Y`[Ubn`_fUggYb`HmdYb`i bX`X]Y
A ÀbbYfž`X]Y`]\fY`: fUi Yb`_cbhfc``]YfYb ž`gU[h`Yf"'; `Y]W\nY]h][`k]fX
YXcW\`XYi h`]W\ž`XUgg`Yf`a]h`XYf`G]hi Uh]cb`\UXYfhž`U`g`Yf`g]Y`a]h
XYb`K cfhYb` Bi f`ZØf`X]W\ `g]Y\hii bX`d`Uhnh` K]``gh`Xi 'a]W\
j YfUfgW\Yb3`\\\`\UVY`X]W\`Yhnh`\\$\\$`GY_i bXYb`[YgY\Yb`i bX`Xi
[Y\qh`XUbb``cg"`K Ug`]gh`XYbb`ZØf`a]W\`XU3

9]bV`]W_Y`]b'X]Y'<YfUi gZcfXYfi b[Yb'XYg 9\Y`YVYbg

5bbU!A Uf]U'\]b[Y[Yb'[]Vh'ni ž'XUgg'g]Y']\fY'Y][YbY'6Ø\bY VfUi Whži a 'ZØf'6i g\]Xc']bhYfYggUbh'ni 'V'Y]VYb'' ?cb_i ffYbn VY'YVh'XUg'; YgW\AZh ž'Yf_`Afh'g]Y'i bX'fYZY_h]Yfh'XUfØVYfž'k]Y'g]Y VYcVUW\hYhž'k]Y'UbXYfY': fUi Yb'Ui Z']\fYb'A Ubb'k]f_Yb'' 8i XYb_gh'XUbbž'a Y]bY': fUi 'g]Y\h'f]W\h]['\Y]» 'Ui g'i bX'g]Y'[Y\h'Yhnh fUi g'' : Øf'g]Y']gh'Yg'k]W\h]['ž']b'Y]bYf'`Ub[Zf]gh][Yb'6Yn]Y\i b['k]Y]\fYf'a]h'6i g\]Xc'X]Y'Y][YbY'5hhfU_h]j]hÀh'i bX GY`Vghk U\fbY\a i b['ni '\]bhYfZfU[Yb''

8 Yf Dc X W Ugh V] Y h Y h 'b] W h 'b i f '9] b V `] W Y '] b '] \ f Y '6 Y n] Y \ i b [ž 'g c b X Y f b U i W \ '] b '] \ f '[Ya Y] b g U a Y g '@ Y V Y b 'a] h '] b g [Y g U a h 'U W h '?] b X Y f b '] b 8 i V U] " '5 b b U ! A Uf] U i b X '5 b] g ': Y f W] W \] 'n] Y \ Y b 'g] W 'f Y [Y `a À »] ['] b] \ f '9 \ Y V Y h h 'n i f Ø W _ ž i a 'i b [Y g h O f h 'k] W h] [Y 'H \ Y a Y b 'n i V Y g d f Y W Y b ž 'Z Y f b U V 'j c b 'X Y f 'F U d ! G n Y b Y 'i b X 'a O [`] W Y b _ f] a] b Y ``Y b 'J Y f g h f] W _ i b [Y b "

$FY[Y^a \hat{A}][Y^9]bV^]W_Y^i bX^a Y f$

8]Y'@Y]XYbgW\UZh'ZØf'XYb'DcXWUgh'i bX'XUg']bh]a Y': cfa Uh'g]bX
Y][YbghÀbX]['i bX'gY\Ybgk Yfh"'5bbU!A Uf]U'i bX'5b]g'gdfYW\Yb
Y\f']W\'ØVYf']\fYb'5``hU[ž']\fY'JYf[Ub[Yb\Y]h'i bX'X]Y'Ni _i bZhž
k Ug'XUg'=bhYfYggY'Ub']\fYa '@YVYb'k Y]hYf'Ub\Y]nh"'G]Y'V]YhYb'XYb
Ni \OfYfb'Y]bY'D`UhhZcfa ži a 'g]Y'VYggYf'_YbbYbni 'YfbYb"' =a

6Yhha]h5bbU!A Uf]U'i bX'5b]g': YfWX]WX] 'k]fX'YXYb': fY]hU[ni Yfgh'Ui Z'F H@Ž 'j YfÒZZYbh`]WXh'i bX'\Uh'XUb_'gY]bYf'Y\f`]WXYb
±b\U`hY'VYfY]hg'Y]bY'hfYi Y'Ni \ÔfYfgWXUZh'[Yk cbbYb"

K Yf'a Y\f'ØVYf'X]Y'gdUbbYbXYb'5gdY_hY']\fYf'6Yn]Y\i b[
YfZU\fYb'a ÒW\hYž'gc``hY'g]W\'X]Y'U_hi Y``Yb': c`[Yb']\fYg'DcXWUghg
b]W\h'Ybh[Y\Yb'``UggYb"'=\f'9\Y`YVYbž'[Ydf\[A][h']cb
<YfUi gZcfXYfi b[Yb'i bX'<i a cfž'XØfZhY'Ui W\'ZØf'j]Y`Y'<\DfYf'jcb
=\bhYfYggY'gY]b"': Øf'X]Y'_ca d`YhhYb'8YhU]`g'i bX''YXY'bYi Y'9d]gcXY
VYgi W\Yb'G]Y'F H@g'DcXWUghgY]hY'cXYf'`YgYb'G]Y'VY]'6Yf`]b
@]j Y'bUW\"'

8 YhU]`g	
J c f ZU``	G_UbXU`
Cfh	6Yf`]bž'8Yi hgW\`UbX
EiY``Yb	• k k k "VYf`]b!`]j Y"XY
	dcXWUghg"Udd`Y"Wca

6Ygi WXYb G]Y i bg Ui Z b!U["XY