

: `YXYfa Ui g!GW\i hn. `Fch\YbZY`gYf'?]fW\Y Yf\À`h'l a k Y`hd`U_YhhY°

a '@UbX_fY]g'A U]b!GdYggUfh'k i fXYb'' * '; YVÀi XY Ui g[YnY]W\bYhž'XUfi bhYf'X]Y'Fch\YbZY`gYf'?]fW\Yž'ZØf']\fYb 6Y]hfU['ni a ': `YXYfa Ui ggW\i hn"



Fch\YbZY`gž'8Yi hgW\`UbX`!`5a '%*"\$*"&\$&) 'ki fXY`X]Y

DZUff_]fW\Y`]b'Fch\YbZY`g`a]hY]bYf'D`U_YhhY`XYg

I a k Y`ha]b]ghYf]i a g'Ui g[YnY]W\bYhž'k Ug'Y]bYb'YfZfYi `]W\Yb

GW\f]hh'ZØf'XYb'Ofh`]W\Yb'BUhi fgW\i hn'XUfghY``h"'8]YgY

5i gnY]W\bi b[']gh'a Y\f'U`g'bi f'Y]b'HØdZY`W\Yb'Ui Z'XYa ']ž'XYbb

g]Y'i bhYfghfY]W\h'XUg'9b[U[Ya Ybh'XYf'?]fW\Yb[Ya Y]bXY'ZØf'XYb

GW\i hn'XYf'VYXfc\hYb': `YXYfa Ài gYž']bgVYgcbXYfY'XYg'; fc>Yb

A Ui gc\fg"'=bg[YgUa h'hfU[Yb'bi b'' *'; YVÀi XY']a '@UbX_fY]g'A U]b!

GdYggUfh'X]YgY'D`U_YhhYž'k Ug'X]Y'FY[]cb'ni 'Y]bYa 'k U\fYb

<chgdch'ZØf': `YXYfa Ui g`YVYbgfÀi a Y'a UW\h"'A U]b!GdYggUfh

VYf]W\hYhž'XUgg']a '\\\Y\f'\&\\$&(']b'XYf'Fch\YbZY`gYf'?]fW\Y'fi bX'&'\\$
: `YXYfa Ài gY'[YnÀ\`h'ki fXYb"

8 c W. 'gc 'Y]bY '5 i gnY]W. bi b['_ca a h'b]W. h'j cb'i b[YZÀ\f"'8]Y Ni gUa a YbUfVY]h'nk]gW.Yb '8 Yb_a U`gW.i hn'i bX 'BUhi fgW.i hn [YghU`hYh'g]W. ']b'\]ghcf]gW.Yb'; YVÀi XYb'k]Y'?]fW.Yb'c Zh'U`g < YfUi gZcfXYfi b["'J cf'U``Ya 'VY]'GUb]Yfi b[gUfVY]hYb'a ØggYb UfhYbgW.i hnfYW.h`]W.Y'6Y`Ub[Y'VYfØW_g]W.h][h'k YfXYb" : fØ\nY]h][Y'5VgdfUW.Yb'_ObbYb'\Y`ZYbž'X]YgY < YfUi gZcfXYfi b[Yb'ni 'a Y]ghYfb ž'VYhcbhY @UbXfÀh]b'GUV]bY G]hhYf'VY]'XYf', VYf[UVY'XYf'D`U_YhhY"'5i W. 'XUg'9b[U[Ya Ybh'XYf Y\fYbUa h`]W.Yb': `YXYfa Ui gVYUi ZhfU[hYbž'X]Y'g]W.'i a 'X]Y 9fZUggi b['XYf'6YghÀbXY'i bX'6YfUhi b['_Øa a Yfbž']gh'b]W.h'ni i bhYfgW.ÀhnYb"

: `YXYfa Ui gei Ufh]YfY]b ?]fWXYb

9]b'6']W_'Ui Z'X]Y'I bhYfgi Wi b[žX]Y']b'%\$('?]fWXYb'Xi fWX[YZØ\fhki fXYž'nY][h': Ugh', \$'DfcnYbh'X]YgYf'; chhYg\ài gYf'g]bX'j cb: 'YXYfa ài gYb'VYg]YXY'h'': Øf'j]Y'Y'X]YgYf'H]YfY'ghY''Yb'?]fWXYb ØVYf'YVYbgbchk YbX][Y'Ei Ufh]YfY'XUf''8 Ug']gh'b]WXh'bi f'k]WXh][ZØf'XYb'BUhi fgWXi hnž'gcbXYfb'Ui WX'Y]b'NY]WXYb'ZØf'X]Y'Yb[Y JYfVi bXYb\Y]h'nk]gWXYb'XYf'cXYf'XYa'; 'Ài V][Yb'i bX'XYf'BUhi f''8]Y'[i hY'Ni gUa a YbUfVY]h'nk]gWXYb'XYb'?]fWXYb'i bX'XYb I a k Y`hU_h]j]ghYb']gh'Y]b'[i hYg'6Y]gd]Y''ZØf'XUg'A]hY]bUbXYfž'XUg]b'XYf'FY[]cb'\cWX']a''?i fg'ghY\h''

 $: \emptyset f'X]Y'9f\setminus U'hi b['X]YgYf'@YVYbgfÅi a Y'g]bX'gdYn]Y'`Y \\ A U >> b U \setminus a Yb'YfZcfXYf']WX ž'k]Y'Ui Z': `YXYfa Ui g!6UmYfb 'Yf'Åi hYfh k]fX'''6Y]'FYbcj]Yfi b[Yb'X\InftyfY'y]gd]Y`gk Y]gY'6Y[Ugi b[Yb'i bX UbXYfY'9]b[f]ZZY'b]WX h'k \(A \) fYbX'XYf'K cWXYbghi VYbnY]h'XYf : `YXYfa \(A \) i gY'Xi fWX[YZ\Infty\) fh'k YfXYb'''Ni XYa 'g]bX \(ZYXYfa Ui gZfYi bX`]WXY'\DgY_hYbVY_\(A \) a dZi b[ga]hhY`'b\(O h)][\(ž'k Ug X)Y'K]WX h][\(_Y)h'XYf'gYbg]V'Yb'6Y\UbX'i b['X]YgYf'H]YfY i bhYfghfY]WX h''$

9]b NY]WXYb ZØf XYb I a k Y`hgWXi hn

8 Ugʻ9b[U[Ya Ybhʻ]bʻFch\YbZY`gʻk]fXʻb]W\hʻbi fʻa]hʻXYfʻD`U_YhhY [Yk ØfX][hžʻgcbXYfbʻUi W\ʻXi fW\ʻX]Yʻ5bVf]b[i b['Y]bYf ni gÀhn`]W\YbʻD`U_YhhYʻa]hʻXYfʻ5i ZgW\f]Zhʻ: `YXYfa Ài gY

k]`_ca a Yb "'8Ua]h'k]fX'gck c\``XYf'6Yj Ò`_Yfi b['U`g'Ui W\`XYb 6Ygi W\Yfb'g][bU`]g]Yfhž'XUgg'X]Y'?]fW\Y'Y]b'g]W\YfYf'Cfh'ZØf'X]YgW\ØhnYbgk YfhYb'H]YfY']gh"' 8Ug'J YfhfUi Yb'XYf'DZUff[Ya Y]bXY']bX]Y'6YXYi hi b['XYg'K cW\bghi VYbei Ufh]Yfg']a 'Hi fa 'XYf'?]fW\Y k]fX'gca]h'g]W\hVUf ž'Yf[Àbnh'G]hhYf"

8 Ub_'XYf'\Yfj cffU[YbXYb'@YVYbgVYX]b[ib[Yb']a '@UbX_fY]g A U]b!GdYggUfh' 'Y]bY'9]bgW\Ahni b[žX]Y'Ui W\'A Uhh\]Ug'< Ua a Yf j cb'XYf'I b]j Yfg]h\Ah'9f\Ub[Yb'hY]\h' 'k]fX'XYf'@UbX_fY]g'U\g'Y]bYg XYf'k Yfhj c``ghYb'FØW_ni [g[YV]YhY'ZØf': `YXYfa AigY']b'6UmYfb k U\f[Ybca a Yb"'8]YgY'9fZc`[Y'g]bX'Y]b'X]fY_hYg'FYgi `hUh'XYf Ni gUa a YbUfVY]h'nk]gW\Yb'XYb'j YfgW\]YXYbYb'5_hYi fYbž'X]Y'X]Y 6Y`Ub[Y'j cb'BUhi fgW\i hn'i bX'8Yb_a U`gW\i hn'U_h]j']b'9]b_`Ub[Vf]b[Yb"

K]Y'X]Y'; YgW]W hYb'ØVYf'X]YgY': `YXYfa Ui gei Ufh]YfY
k Y]hYf[Y\Ybž'V`Y]Vh'gdUbbYbX"'9]b':]`a hYUa 'XYg'6]ghi a g
K ØfnVi f['k Uf'VY]'XYf'5i gnY]W bi b['Ubk YgYbXž'i bX'+b\U`hY
k YfXYb'VU'X'Ui Z' FUX]c'6]ghi a 'K ØfnVi f['gck]Y']a
?]fW Yba U[Un]b'?]fW Y']b'6UmYfb 'ni'\ÒfYb'gY]b"'8Yf
B Uhi fgW i hn']b'A U]b!GdYggUfh']gh'U_h]j 'i bX'g]W hVUfž'i bX'YXYf
_`Y]bY'GW f]hh'nÀ\`h']b'XYf'9f\U`hi b['X]YgYf'ZUgn]b]YfYbXYb'H]YfY°

8 Y hU]`g	
Cfh	Fch\YbZY`gž'8YihgW\`UbX
EiY``Yb	k k k "a U]b!gdYggUfh"XY
	• k k k "Z`YXYfa Ui g!VUmYfb"XY

6 Ygi WX Yb 'G]Y 'i bg 'Ui Z. 'bU[!VUmYfb"XY