

## 

 $\label{eq:condition} 9g'k Uf'a i h][~'j cb'A Uf]c'Jc][~h'''5VYf'Ui W\f]g_Ubh''5a ~'9bXY'XØfZhY H\Øf]b[~Ybg'78I !@UbXYgW\YZ'gc[~Uf'gY]b'j~]Y``Y]W\h'k ]W\h][~ghYg'N]Y` YffY]W\h'\UVYb. '9f']gh'VY_UbbhYf'[~Yk cfXYbž'b]W\h'bi f']b'gY]bYa 6i bXYg`UbXž'gcbXYfb']b'[~Ubn'8Yi hgW\`UbX'''Jc][~h'\Uh']a : YfbgY\Xi Y```a ]h'H\Øf]b[~Ybg'5Z8!7\YZ'6'Ôfb'<<math>OW_Y'gY]bY'Y][~YbY DYfgcbU`]Y'[~YVccghYfh''8Yf'DfY]g'XUZØf'k Uf'\cW\"$ 

< OW\_Y `]b `Y]b `HJ !8 i Y```Y]bni `UXYbž ZØ\fh XUni ž XUgg Yf bYi Y

K À\`YfgW\]W\hYb'[Yk]bbhi bX`XUgg'Yf'gY]bY'⇒XYc`c[]Y']b'Y]b VØf[Yf`]W\Yg'?cfgYhh'\_`Y]XYb'\_Ubb"'8Ug'k i fXY'XYi h`]W\ž'U`g'Yf XYb'bYi fYW\hYb'?Ua dZVY[f]ZZ'XYf' FYa][fUh]cb 'U`g'A U»bU\a Y ZØf'\_cbgYei YbhYg'5VgW\]YVYb'Ui gfY]gYdZ]W\h][Yf'5i g`ÀbXYf hUfbhY"

6Yf`]b

 $8 ] Y '\_cbhfcj YfgY '8 YVUhhY 'nk ] gWX Yb 'A Uf] c 'J c] [h'i bX'6' Ofb' < OW_Y ] a ': YfbgY \ Xi Y``` \ Uh'b] WX h'bi f'] b 'H\ Øf] b [Yb 'ZØf'5i ZgY \ Yb' [Ygcf[hž gcbXYfb'Ui WX' ØVYf'X]Y'; fYbnYb'XYg'6i bXYg`UbXYg'\] bUi g'''J c] [hž XYf'78 I !@UbXYgWXYZž_cbbhY'Xi fWX'X]YgY'5i gY] bUbXYfgYhni b [gY] bY'6Y_Ubbh\Y] h'ghY] [Yfbž'U``YfX] b [g'ni 'Y] bYa '\c\Yb'DfY] g'' 5i WX'gY] b'?cb_i ffYbh' < OW_Yž'XYf'U`g'FYWX hgUi > Yb'] b'XYf fYWX hgcf] Ybh] YfhYb'DUfhY] '5 Z8' []`hž'_cbbhY'j cb'X] YgYa '8i Y`` dfcZh] YfYb'i bX'gY] bY'YI hfYa ]gh] gWXYb'5 bg] WX hYb'Y] bYa 'VfY] hYb Di V`]_i a 'dfAgYbh] YfYb''$ 

8]Y'9]b`UXi b['<ÒW\_Yg'ni 'XYa 'HJ!8i Y```\Uh'YXcW\'Ui W\'`c\_U`
5i gk ]f\_i b[Yb"'8i fW\'X]Y'a YX]U`Y'5i Za Yf\_gUa \_Y]h'[Yk]bbh'Yf
bYi Y'K À\`YfgW\]W\hYb'i bX'\_Ubb'gY]bY'\RYc`c[]Y']b'Y]b
VØf[Yf`]W\Yg'?cfgYhh'\_`Y]XYb"'9]b'6Y]gd]Y``XUZØf']gh'X]Y
JYfk YbXi b['XYg'bYi fYW\hYb'?Ua dZVY[f]ZZg' FYa][fUh]cb ži bhYf
XYa 'Yf'\_cbgYei YbhY'5VgW\]YVi b[Yb'j cb'Ui gfY]gYdZ]W\h][Yb
5i g`ÀbXYfb'j YfghYW\_h"

6YgcbXYfg'\_cbhfcj Yfg'k Uf'< ÒW\_Yg'5i ggU[Y']a 'HJ!8i Y``ž']b'XYf'Yf XYb'< c`c\Wi gh'U`g' G\W\UbXY 'VYnY]\W\bYhY' 'X]Yg'ghY\h']a K ]XYfgdfi W\'ni 'Y]bYf'Zf\Ø\YfYb'FYXY\ž']b'XYf'Yf'Y]bY Yf]bYfi b[gdc`]h]g\W\Y'K YbXY'i a '%, \$'; fUX 'ZcfXYfhY'''8]Yg j YfXYi h`]\W\h'gY]bY'i b[`Ui Vk \ØfX][Y'< U`hi b['i bX'gY]bY; Yg\W\]\W\hgfYj ]g]cb]ga i gj Yfgi \W\Y''

±b·X]YgYa 'Ni gUa a Yb\Ub[ 'gY]'Ub'XYb'%%"'5df]`'%-() 'Yf]bbYfhž'UbXYa 'U``]]YfhY'Gc`XUhYb'X]Y'?cbnYbhfUh]cbg`U[ Yf'6i WXYbk U`X'i bXA]hhY`VUi!8cfU']b'H\Øf]b[ Yb'VYZfY]hYb"'5bghUhh'Ub'X]YgYa 'HU[XYb'A YbgWXYb'ni '[ YXYb\_Ybž'X]Y'XUa U`g'Xi fWX'XYb'XYi hgWXYbJYfb]WXhi b[ gk U\b'i a g'@YVYb'\_Ua Ybž'k i fXY'XYf': c\_i g'XYg'HJ!8i Y``g'Ui Z'<ÒW\_Y'[ Y`Y[ h"

⇒a ': c`[ YbXYb'Z]bXYb'G]Y'Y]bY'HUVY``Y'a ]h'fY`Yj UbhYb ⇒bZcfa Uh]cbYb'ni 'XYb'VYhY]`][ hYb'Dc`]h]\_Yfb.

 $8 ] YgY = DZcfa Uh]cbYb : gc``Yb : Y]bYb : VYfV : ] W_ : \emptyset VYf : X]Y : 9bhk ] W_ : b[XYf : 6Y_Ubbh : Y]h : XYf : Dc : ] h]_Yf : j cf : i bX : bUW : XYa : HJ ! 8 i Y : : [YVYb "$ 

EiY~Y.69F@=B9FACF; 9BDCGH#chg

8 Y hU]`g

6 Ygi W Yb 'G | Y 'i bg 'Ui Z. 'a Y | b! V Yf ` | b "b Yh