

## NY`Ybg\_m 'K ]Y 'Yf 'Hfi a d 'hfUZ'i bX 'X]Y ?i bgh XYg '8 YU`g '`YfbhY

8]Y'G]hi Uh]cb']b'XYf'K Y'h'j cb'8cbU'X'Hfi a d'ÀbXYfh'g]W\
gW\bY``"Jcf'Y]b][Yb'HU[Yb'VYnY]W\bYhY'XYf'I G!Df\Ag]XYbh
Z\A\gW\\]W\Yfk Y]gY'XYb'i \_fU]b]gW\Yb'Df\Ag]XYbhYb'K c\cXma mf
GY\Ybg\_m^U\g' 8]\_hUhcf \(\frac{z}{x}\text{XYf'XYb'?}f]Y[\text{Fi gg\UbXg']b'XYf}\)
\[\\_fU]bY'VY[cbbYb\\UVY"\8c\W\Ua':fY]hU['k]fX'XYf\)
\[\\_fU]b]g\W\Y'?f]Y[g\Y\X'a]h'Y]bYa'\ZY]Yf\]W\Yb'9a d\ZUb[']a\
\[\K\Y]\rightarrow\to Ui\g'Ya\d\ZUb[Yb"'9]b'k]\W\h][\Yg'HfY\ZZYb\nk]g\W\Yb\\Hfi a\d'i\bX'GY\Ybg\_m^\K\]f'k\YfXYb'Y]b'gY\f'[i\hYg'HfY\ZZYb\\UVYb''' K]f'k\YfXYb'i\bg'k]f\_\]W\(\frac{1}{1}\text{Y}\text

8]Y'G]hi Uh]cb']b'XYf'K Y`h'j cb'8cbU'X'Hfi a d'ÀbXYfh'g]W\gW\bY``"
J cf'Y]b][Yb'HU[Yb'VYnY]W\bYhY'XYf'I G!DfÀg]XYbh
ZÀ`gW\`]W\Yfk Y]gY'XYb'i \_fU]b]gW\Yb'DfÀg]XYbhYb'K c`cXma mf
GY`Ybg\_m^U`g' 8]\_hUhcf ž'XYf'XYb'?f]Y['Fi gg`UbXg']b'XYf'I \_fU]bY
VY[cbbYb'\UVY"'8cW\'Ua': fY]hU['k]fX'XYf'i \_fU]b]gW\Y
?f]Y[g\Y`X'a]h'Y]bYa'ZY]Yf`]W\Yb'9a dZUb[']a'K Y]»Yb'<Ui g
Ya dZUb[Yb"

9]b'k ]W\h][Yg'HfYZZYb'nk ]gW\Yb'Hfi a d'i b $X'GY'Ybg_m^{\wedge}$ 

K ]f'k YfXYb'Y]b'gY\f'[i hYg'HfYZZYb'\UVYb"' 'K ]f'k YfXYb'i bg k ]f\_`]W\'[i hij YfghY\Yb"'C\_Umž'k ]f'\UVYb'j ]Y`'F YgdY\_h"'\=\W\'\UVY [fc»Yb'FYgdY\_h'j cf']\a ž'gU[hY'Hfi a d'Ua '8cbbYfghU["GY`Ybg\_m^\Uh'gY]bYfgY]bY'YbhgW\Y]XYbXY'@Y\_h]cb'[Y`Yfbh; YVYb'G]Y'Hfi a d'XYb'9fZc`["

 $8 \ Yf'6 \ Ygi \ W']b'K \ Ug \ ]b[hcb$ 

?i fnY K YfVYY]bV`YbXi b[

JYf\UbX`i b[Yb'ØVYf'A]bYfU`fYggci fWb

9]b``Ub[Yf'KY[`nif'G]WXYfY]h

5i Wk 'k Ybb 'Yg']\a '[Y`i b[Yb 'gY]b'\_ObbhYž'X]Y 'XfU\_cb]gWkghYb
5gdY\_hY 'XYg'J cfgWk `U[g'ni 'YbhZYfbYbž'\UhhY 'GY`Ybg\_m^k Yb][
K U\`a O[`]Wk\_Y]hYb"'9f'j Yfgi Wkhž'g]Wk 'k]YXYf']b 'X]Y
: f]YXYbg[YgdfÀWkY'Y]bni Vf]b[Yb"'Gc``hY 'GY`Ybg\_m^g'YfghYf'6Ygi Wk
VY]'Hfi a d'bUWk 'gY]bYf'K]YXYfk U\``X]Y '6YZØfWkhi b[Yb
nYfghfYi Ybž'XUgg'X]Y 'I\_fU]bY'j YffUhYb'k]fXž'\_ObbhY'X]Yg'Ui Wk'X]Y
A O[`]Wk\_Y]h'Y]bYf'`Ub[Zf]gh][Yb'I G!6Yn]Y\i b['ni a '@UbX'YfOZZbYb
'Y]bY'5i gg]Wkhž'X]Y'bcWk'j cf'k Yb][Yb'HU[Yb'i bk U\fgWkY]b`]Wk
qWk]Yb"

Hfi a dg'J YfhfUi Yb']b'Di h]b

Hfchn XYf'j ]Y`Yb'J YfÀbXYfi b[Yb'nk]gWXYb'GY`Ybg\_m'i bX'Hfi a d\ung]WX'b]WX hg'nk]gWXYb'Hfi a d'i bX'Di h]b'[YÀbXYfh"'Hfi a dg\bar{\text{

8]Y'Gcf[Yb'XYf'JYfVØbXYhYb

K À\fYbX'Hfi a d'a Ò[`]W\Yfk Y]gY'Y]bYf'XYf'k Yb][Yb'k Ygh`]W\Yb : Ø\fYf']ghž'X]Y'Di h]b'Ub'XYb'JYf\UbX`i b[gh]gW\'Vf]b[Yb'\_ObbhYbž []Vh'Yg'gdØfVUfY'Ÿb[ghY'i bhYf'XYb'I G!JYfVØbXYhYb']b'9i fcdUž XUgg'Hfi a d'g]W\'a ]h'YXYa 'VY`]YV][Yb'8YU`ni Zf]YXYb'[YVYb k]fXž'XYf'Di h]bg']``Y[U`Y'9fcVYfi b['j cb'Yhk U'&\$i 'XYg i \_fU]b]gW\Yb'HYff]hcf]i a g'`Y[]h]a ]Yfh'i bX'XUg'F]g]\_c'Y]bYg'bcW\gW\`]a a YfYb'?f]Y[Yg']b'XYf'Ni \_i bZh'V]f[h"

5i Zfi Z'ni f'Jcfg]W\h

: fØ\YfY'7=5!8]fY\_hcfYbii bXiJYfhY]X][i b[ga]b]ghYfik UfbYbij cf Hfi a dgibU]j Ya iJYfhfUi Ybi]biDi h]b" =\Wi[`Ui VYžYgi]ghik]\Wih][ž XUggiXYfiDfAg]XYbhžii bXi]\Wij YfghY\YžXUggiYfij Yfgi WihžDi h]biUb XYbiH]gWini iVf]b[YbžiUVYfiYfia i ggik]ggYbžiXUggiDi h]bib]\Wih j YfhfUi Ybgk ØfX][i]gh žigci@YcbiDUbYhhU"i9I!B5HC! CVYfVYZY\`g\UVYfi\Ja YgiGhUj f]X]gia Yf\_hYiUb.i =\Wik ØfXYi]\a b]W\h'hfUi Ybz'gc'k Y]h'k]Y']W\']\b'k YfZYb'\_Ubb"

8Yf'9]bZi gg'XYg'Yi fcdÀ]gWXYb'6Ygi Wkg

8 Yf '6 Ygi W 'j cb '6 f]hYb 'DfYa ]Yfa ]b]ghYf '? Y]f 'GhUfa Yf ']gh 'Y]b 6 Y]gd]Y ` 'ZØf 'XUg 'H\YUhYfž 'XUg 'Yi fcd À]gW Y : Ø\fYf 'Ui ZZØ\fYb a ØggYbž 'i a 'Y]bYb 'Df Àg]XYbhYb 'ni 'YffY]W Ybž 'XYf 'VYfY]h ']ghž 'Y]bY , \$! 'À\f][ Y ']bhYfbUh]cbU`Y '`]VYfU`Y 'CfXbi b[ 'ni '[ YZÀ\fXYb" K À\fYbX 'GhUfa Yfž Y]b 'X]gn]d`]b]YfhYf 'i bX 'ni fØW\_\U`hYbXYf Dc`]h]\_Yfž j Yfgi W hYž 'Hfi a d'a ]h 'Y]bYf '9]b`UXi b[ 'j cb '? Òb][ 7\Uf`Yg'=" 'ZØf 'Y]bYb 'GhUUhgVYgi W 'ni 'gW a Y]W Y`bž ghY``h 'g]W 'X]Y : fU[ Yž 'c V 'gc`W Y 'GW a Y]W Y`Y]Yb 'VY] 'Hfi a d'K ]f\_i b[ 'nY][ Yb" '5 a 9bXY '\_ÒbbhY 'XUg 'GW ]W\_gU` 'XYf 'I \_fU]bY 'nk ]gW Yb 'XYa '; `Ubn Y]bYg'\_Òb][`]W Yb '6 Ygi W g'i bX 'XYb': cfXYfi b[ Yb'j cb 'Di h]b 'Ui Z XYf'?]ddY 'ghY\Yb"

8 YhU]`g`ni f`A Y`Xi b[EiY``YYX]h]cb"Wbb"Wca

Gci fWY. X]Y!bUWX f]WX hYb"Uh

8 Y hU]`a

6 Y gi W Y b 'G]Y 'i b g 'Ui Z 'b!U[ "X Y