

### 6cfi gg]U'A ÒbWXYb[`UXVUWX.', VYfZØ``hYg A]hhY`ZY`X'i bX'K YWXgY`[YfØWXhY

6cfi gg]U'A ÒbWXYb[`UXVUWX`ghY\h'j cf DYfgcbU`YbhgWXY]Xi b[Yb']a 'A]hhY`ZY`Xž'k À\fYbX'A U]bn'\$) i a 'HU`Ybh'CgWUf': fUi `c'\_cb\_i ff]Yfh"

## : fUi `c ]a : c\_i g. 8 Y f K Y hh\_Ua d Z i a `X Ug A ]hhY `ZY `X hU `Y b h

 $8 \ Yf'K \ YWX \ gY``j \ cb `CgWUf': fUi `c'gcf[ h'XYfnY]h'ZØf'gdUbbYbXY \\ 8 \ ]g_i \ gg]cbYb']a \ `XYi \ hgWXYb': i » VU``"'8 \ Yf'&$!'\ A\ f][ Y'8 \ AbY'\ Uh g]WX']b'XYf'j \ Yf[ Ub[ YbYb'GU]gcb'k \ A\ fYbX'gY]bYf'@Y]\ Y'VY]a \ : 7 \\ I \ hfYWXh'\ Yfj \ cffU[ YbX'df\ AgYbh]Yfh'i \ bX'Yg'[ YgWX UZZhz'XUg'\ bhYfYggY a \ Y\ fYfYf'7`i \ Vg'ni 'k \ YW_Yb''6 \ YgcbXYfg'XYf'%'': GJ'A \ U]bn'$) \\ gWXY]bh'ghUf_'Ui Z'XYb'' h b[ Yb'Gd]Y`Yf'ni 'gYhnYb''$ 

#### 8Yf'U\_hi Y``Y'GhUbX'XYf'JYf\UbX`i b[Yb

@Ui h: DZcfa Uh]cbYb'Ui g'A YX]YbVYf]WXhYb'\Uh'A U]bn'\$) ži bhYf'XYf @Y]hi b['j cb'HfU]bYf'6c'<YbXf]\_gYbž'Y]b'VYgcbXYfYg'5i [Y'Ui Z: fUi `c'[Yk cfZYb"'<YbXf]\_gYbž'XYf'gY`Vgh'Ui g'8ÀbYa Uf\_'ghUa a hž nY][h'[fc»Y'K YfhgWXÀhni b['ZØf'XUg'HU`Ybh'i bX'VYj cfni [h'`Ui h Y][YbYf'5i ggU[Y'X]Y'J]Y`gY]h][\_Y]h'XYg'A]hhY`ZY`Xgd]Y`Yfg"'6Y]'XYb JYf\UbX`i b[Yb'i a 'X]Y'5V`ÒgYgi a a Y'ghY\Yb'g]WX'X]Y'JYfY]bY U``YfX]b[g'bcWX'[Y[YbØVYf"'A U]bn'ghfYVh'Ubž'X]Y'[YZcfXYfhY Gi a a Y'j cb'XfY]'A]``]cbYb'9i fc'Ui Z'i bhYf'&ž) 'A]``]cbYb'9i fc'ni XfØW\_Yb"

8]Y?cb\_i ffYbn ]a 6]YhYfj YfZU\fYb

BYVYb'A U]bn'nY][Yb'Ui W\'< Ubbcj Yf'-\*'i bX'XYf': 7'I hfYW\h

\delta\hYfYggY'Ub': fUi `c''K \( \alpha\) fYbX'X]Y'B]YXYfgUW\\ gYb'Y]bY'@Y]\Y

VYj cfni [Ybž'a \( \delta\) hY'XYf': 7'I hfYW\ h'XYb'Gd]Y`Yf'[YfbY'ZYgh

j YfdZ]W\\ hYb''8]Yg'\_\delta\bhY'\YXcW\'Ui Z[fi bX'XYf'ZY\`YbXYb

?Ui Zcdh]cb']a 'i fgdfØb[`]W\Yb'@Y]\j YfhfU['\_ca d`]n]Yfh'k YfXYb''

Gca ]h'VY[]bbh'Y]b'gdUbbYbXYg'6]YhYfj YfZU\fYbž']b'XYa 'g]W\'X]Y

XfY]'7'i Vg'i a 'XUg'A]hhY`ZY`XhU`Ybh'VYa Ø\Yb''

#### 8]Y'<YfUi gZcfXYfi b[Yb'ZØf'6cfi gg]U A ÒbWXYb[`UXVUW

: Øf'6cfi gg]U'A ÒbWXYb[`UXVUWX 'ghY\Yb'XYfk Y]`Y]b][Y
9bhgWXY]Xi b[Yb'Ub"'HfU]bYf'; YfUfXc'GYcUbY'g]Y\h'g]WX'a ]h'XYf
<YfUi gZcfXYfi b['\_cbZfcbh]Yfhž'Y]b'ØVYfZØ``hYg'A ]hhY`ZY`X'ni
j Yfk U`hYb"'A ]h'bUa \UZhYb'Gd]Y`Yfb'k ]Y'\$\rightarrow\notation'?cbÅ
i bX'7\f]ghcd\'?fUa Yfž'ghY\Yb']\a 'nU\`fY]WXY'Cdh]cbYb'ni f
JYfZØ[i b["'I a 'D`Uhn'ZØf'bYi Y'JYfghÀf\_i b[Yb'ni 'gWXUZZYb'i bX
XYb'?UXYf'ni 'cdh]a ]YfYbž'\_ÒbbhYb'JYf\_Ài ZY'i bi a [Àb[`]WX'gY]b"
?fUa Yf'i bX'?cbÅ'k YfXYb'U\_hi Y``'U`g'a Ò[`]WXY'5V[Àb[Y
[Y\UbXY`h"</pre>

#### 8]Y 6YXYi hi b[ 'XYg'K YWXgY`g'ZØf'X]Y '7`i Vg

8 Yf'5i g[ Ub[ 'XYf'J Yf\ Ub X'i b[ Yb'i a 'C gWUf': fUi 'c'\_ÒbbhY Yf\ YV']WX Yb'9]bZi gg'Ui Z'X]Y'? UXYfd`Ubi b[ 'XYf'VYhY]`][ hYb'7`i Vg\ UVYb": Øf'A U]bn'k ÀfY'XYf'Ni \_Ui Z'Y]bYg'4 b[ Yb'HU`Ybhg'k ]Y: fUi 'c'Y]b'k ]WX h][ Yf'GWX f]hh']b']\ fYf'gdcfh`]WX Yb'9bhk ]W\_`i b[ 'i bX \_ObbhY'X]Y'A UbbgWX UZh'gck c\`'ei U`]hUh]j 'U`g'Ui WX'ei Ubh]hUh]j j YfghÀf\_Yb"; 'UXVUWX'a i gg'g]WX'i bhYfXYggYb'XYf < YfUi gZcfXYfi b[ 'ghY``Ybž'X]Y'E i U`]hÀh']a 'A ]hhY`ZY`X']b'9]b\_`Ub[ a ]h'XYb'Gd]Y`YfUa V]h]cbYb'ni 'Vf]b[ Yb"

8]Y'bÀW\ghYb'K cW\Yb'k YfXYb'nY][YbžcV'A U]bn'\$)'cXYfY]bYg XYf'UbXYfYb']bhYfYgg]YfhYb'HYUa g'XYb'Ni gW\`U['ZØf'XYb hU`Ybh]YfhYb'A]hhY`ZY`Xgd]Y`Yf'Yf\À`h"'8Yf'5i g[Ub['\_ObbhY'b]W\h bi f'XYb'JYf`Ui Z'XYf'\_ca a YbXYb'GU]gcbž'gcbXYfb'Ui W\'X]Y `Ub[Zf]gh][Y'D`Ubi b['XYf'VYhY]`][hYb'JYfY]bY'VYY]bZi ggYb"

# 6 Ygi WX Yb 'G]Y 'i bg 'Ui Z. 'b!U[ "XY