

## : ]`a Yj Ybh'Ybh\Ø``h'XUg'VYXfc\`]W\Y 5fhYbghYfVYb'XYf'\Y]a ]gW\Yb'Jc[Y`k Y`h

9fZU\fYb'G]Y']b'XYf'8c\_i a YbhUh]cb
/eich/Jc[Y`dYfgdY\_h]j Yb/eich/jcb'>Of['5Xc`d\'ibX
BcfVYfh'GW\AZZYfž'k]Y'k]W\h]['JO[Y``ZØf'ibgYfY'^2\_cgmghYa Yg]bX'ibX'kY`W\Yb'<YfUigZcfXYfib[Yb'g]Y'Uig[YgYhnh'g]bX"HUiW\Yb'G]Y'Y]b']b'ZUgn]b]YfYbXY'BUhifUiZbU\aYb'ibX
YbhXYW\_Yb'G]Y'VYY]bXfi W\_YbXY'BUhifgW\ihndfcY\_hY"'GY\YbG]Y'XYb':]`a'Ua'&&"'5i[igh']a'GK FiibX'UV'XYa'&\$"
5i[igh']b'XYf'5F8'AYX]Uh\Y\_"



# Jc[Y`dYfgdY\_h]j Yb 'Ua '&&"'5i [i gh. '9]b 6`]W\_'Ui Z'X]Y'VYXfc\hY'Jc[Y`k Y`h

8]Y'Jc[Y`k Y`h']gh'Y]b'k]W\h][Yf'\DX]\_Uhcf'Z\Of'X]Y'; Ygi bX\Y]h
i bgYfYf'^2 \_cgmghYa Y"'\@Y]XYf'g]bX']b'XYb'`YhnhYb'\*\\$'\J\fYb'ZUgh
X]Y'<\A`ZhY'XYf'J\O[Y`']b'8Yi hgW\`UbX'j YfgW\ki bXYb"'8Yf
8c\_i a YbhUfZ]`a 'Jc[Y`dYfgdY\_h]j Yb 'VY`Yi W\hYh'X]YgY
DfcV`Ya Uh]\_'i bX'VY[`Y]hYh'XYb'Cfb]h\c`c[Yb'BcfVYfh'GW\AZZYf'VY]

gY]bYf'A ]gg]cbž'X]Y'J Ò[Y``ni 'fYhhYb"'8Yf': ]`a ']gh'Ua '&&"'5i [i gh i a '&' .&) 'l \f']a 'GK F'ni 'gY\Yb'i bX'VYfY]hg'UV'XYa '&\$"'5i [i gh ]b'XYf'5F8'A YX]Uh\Y\_'j YfZØ[VUf"

#### 8Yf'JYf'i gh'XYf'Jc[Y'k Y'h

 $8 \ Ug \ 5 \ fh Y \ bgh Y \ fv Y \ b'] \ b' X Y \ f' J \ c[\ Y \ k \ Y \ h'] gh' U' Ufa \ ] Y \ fy \ b X'' Y \ b' n Y] \ b' x Y \ k' y' k' ] W \ h'] \ b' Y' Z \ f' X Y \ b' b' Uh \ p' f' Y \ b' X Y \ b' b' Uh \ p' f' Y \ g' Y \ b' X Y \ b' g ] b X''' B Uhi \ fg W \ i \ hij \ Y \ b X Y ' G \ g \ J Y ' Y b' X U V Y ] 'Y \ b hg W \ Y ] X Y b X Y 'F \ c ``Y''' 8 Y \ f' : ] 'a \ 'b ] a \ a \ h' X ] Y' \ Ni \ g W \ Ui \ Y \ f' a \ ] h' Ui \ Z' Y ] b Y' Y a \ ch ] c b U \ Y' F Y ] g Y \ z' \ n Y ] [ \ h' V Y Y ] b X fi \ W_Y b X Y' 5 i \ Z b U \ a \ Y b' X Y f' B Uhi \ f' i \ b X' V Y' Y i \ W \ hY h' X ] Y \ < Y f Ui \ g Z c f X Y fi \ b [ Y b' i \ b X' 9 f Z c` [ Y' X Y g' B Uhi \ fg W \ i \ hn Y g'' ; \ Y ] W \ n Y ] h] [ V] Y hY h' Y f' 9 ] b V` ] W_Y' ] b' X ] Y' I \ a \ k Y h d c` ] h]_ 'i \ b X' n Y ] [ h'j \ c f V ] 'X` ] W Y \ D f c \ Y_h HY' \ ni \ a \ G W \ i \ h'' X Y f' J \ O [ Y''' 5 b [ Y g] W \ hg 'X Y g' X f Ua \ Uh ] g W Y b \ 5 f h Y b g h Y f V Y b g' ] g h'' \ J \ c [ Y ` d Y f g d Y_h] j Y b \ 'Y ] b' \ c W U_h i Y`` Y g' K Y f_" 8 Y b b' X] Y' J \ c [ Y ` k Y` h' ] g h' Y ] b Y f' X Y f' c Z Z Y b g ] W h` ] W \ g h Y b'' \ \ Z Ø f' [ Y gi \ b X Y'^2 \ _c g mg h Y a Y''' \$ 

#### : Ugn]bUh]cbJc[Y`kY`h'i bXBUhi fgWi hn

8 Yf: ]`a 'VY[`Y]hYh'BcfVYfh'GW\ÀZZYfž'XYb'Jcfg]hnYbXYb'XYg VUmYf]gW\Yb'@UbXYgVi bXYg'ZØf'Jc[Y`!'i bX'BUhi fgW\i hnž'VY] gY]bYf'A ]gg]cb'ni f'FYhhi b['XYf'J\O[Y`"'8UVY]'nY][h'FY[]ggYi f'>Of[5Xc`d\'b]W\h'bi f'X]Y'GW\Ob\Y]h'XYf'Jc[Y`k Y`hž'gcbXYfb'YfnÀ\`h Ui W\'X]Y'ZUgn]b]YfYbXY'; YgW\]W\hY'XYg'? Ua dZYg'i a ']\fYb GW\i hn"'8Yf'VY\_UbbhY'6]fXk UhW\Yf'5fbi `Z'7cbfUX]'hY]`h'YVYbZU``g gY]bY'6Y[Y]ghYfi b['ZØf'\Y]a ]gW\Y'J\O[Y`'Ui Z'dcYh]gW\Y'i bX d\]`cgcd\]gW\Y'K Y]gY"

### 9]b : ]`a 'a ]h 6 c hg W U Zh

Jc[Y`dYfgdY\_h]j Yb '\_ca V]b]Yfh'BUhi fZ]`a Ui ZbU\a Ybž'\\XYYb'i bX \\
\( \alpha\) di `gY'XYg'8c\_i a YbhUfZ]`a gž'i a 'ni 'nY][Ybž'k]Y'\XYYf'9]bnY`bY \\
\( \alpha\) i a 'GW\i hn'XYf'Jc[Y`k Y`h'VY]hfU[Yb'\_Ubb'''8Yf':]`a 'k i fXY'j cb \\
\( \XYf']Z\) DfcXi Wh]cbg':]`a '; a V<']b'Ni gUa a YbUfVY]h'a ]h'XYa 'GK F i bX'6F'dfcXi n]Yfh'i bX'Xi fW\': OfXYf[Y'XYf'i bhYfghØhnh'''8]Y \\
\( \sigma\) fi \\ \f']a 'GK F'i bX'

]gh'VYfY]hg'UV'XYa '&\$"'5i [i gh']b'XYf'5F8'A YX]Uh\Y\_'UVfi ZVUf"

6]`XYf`ghY\Yb`i bhYf`k k k "5F8!Zchc"XY`ni f`JYfZØ[i b["

 $K Y]hYfY = Zcfa Uh]cbYb Z]bXYb G]Y ibhYf hhd.##gk f"`]# c[Y`dYfgdY_h]j Yb$ 

DfYggY\_cbhU\_h '8 Ub]Y`U'?fYggž'HY`"'\$+&&%'-&-'&', \$\$ž 8 Ub]Y`U"?fYgg4 GK F"XY

K Ug3 8]Y'6YXfc\i b['XYf'Jc[Y`k Y`h ]b'8Yi hgW\`UbX

	JD 8 YI TYW UDX
K Yf3	Cfb]h\c`c[Y`BcfVYfh'GW\ÀZZYf
	i bX':]`a Ya UW\Yf'x)f['5Xc`d\
К с3	GK F 'i bX '5F8 'A YX]Uh\Y_
K Ubb3	&&"'5i[ighia'&'.&)'l\f']a
	GK Fž'UV'&\$"'5i [igh']b'XYf'5F8
	A YX]Uh\Y_
K Ufi a ']gh'Yg'k ]W\h][3	8 Y f ': ]`a 'gYbg]V]`]g]Yfh'ZØf'XYb
	JYf`i gh'XYf'Jc[Y`kY`h'i bX
	nY][ hžˈk ]Y ˈ^XYYfˈ9]bnY`bYˈni a
	GWXi hn:VY]hfU[Yb:_Ubb":9f
	]bZcfa ]YfhØVYfX]Y6YXYi hi b[
	XYf'JÒ[Y`'ZØf'i bgYfY
	<sup>2</sup> _c gmghYa Y i b X ``Y b _h X]Y
	5i Za Yf_gUa _Y]h'Ui Z'XYb
	9]bgUhn'j cb
	BUhifgWihnjYfVÀbXYb'ibX'X]Y
	Bchk YbX][_Y]h j cb
	lakY`hgW\ihnaU»bU\aYb"

8 YhU]`g

6Ygi WXYb G]Y i bg Ui Z. a Y]b!VYf `]b "bYh