

'- '>U\fY'? Ua dZ'i a g'@YVYb. '5bXfYUg ; YgWX]WXhY'i bX'gY]b'[fc»Yf'HfUi a °

5bXfYUg; Àgg`Yf`_Àa dZh`gY]h''- '*\J\fYb`[Y[Yb < YfndfcV`Ya Y`i bX`gYhnh`g]\W\`Z\Øf`Cf[UbgdYbXY`Y]b"'9]b\\\V\k\Y[YbXYg`G\W]\\W_gU`"



JYf]b[YbXcfZž8Yi hgWX`UbX`!`5bXfYUg`; Àgg`Yfž'Y]b''-!^À\f][Yf A Ubb'Ui g'JYf]b[YbXcfZž'hfÀ[h'Y]bY'Ui »Yf[Yk Ò\b`]WXY?fUb_\Y]hg[YgWX]WX hY'a]h'g]WX'''GY]b'@YVYb']gh'j cb < YfndfcV`Ya Yb'[YdfÀ[h''9fghY'< YfncdYfUh]cbYb'VY[UbbYbž'U`g'Yf[YfUXY'gYWXg'AcbUhY'U`h'k Uf''A]h'nk Ò'Z'\J\fYb'Yf\]Y`h'Yf'Y]bYb < YfngWXf]hha UWXYfž'XYf'gWX`]Y»`]WX'a]h'&('Xi fWX'Y]bYb 8YZ]Vf]``Uhcf'YfgYhnh'k i fXY'''?i fn'j cf'gY]bYa''\$''; YVi fhghU['Yf`]hh; Àgg`Yf'Y]bYb'GWX`U[UbZU``ž'k Ug'X]Y'?ca d`Yl]hÀh'gY]bYf [Ygi bX\Y]h`]WXYb'G]hi Uh]cb'k Y]hYf'j YfghÀf_hY''Nk Y]'\J\fY'gdÀhYfž]a '5`hYf'j cb'' &'\J\fYbž'Yf`]hh'Yf'Y]bYb'< Yfngh]``ghUbX'i bX j YfVfUWXhY'bYi b'K cWXYb']a '?ca U"

<Yi hY``YVh'5bXfYUg'; Agg`Yf'a]h'Y]bYa '?i bgh\Yfnž'XUg'ØVYf'Y]b</pre>

?UVY``a]h`nk Y]`5__i g'j YfVi bXYb`]ghž`X]Y`Yf`ghÀbX][`hfÀ[hii bX`X]Y]bg[YgUa h`&ž)`?]`c[fUa a `k]Y[Yb"I a `Z]h`ZØf`Y]bY`a Ò[`]W\Y < YfnhfUbgd`UbhUh]cb`ni `gY]bž`hfY]Vh`Yf`fY[Y`a À»][`Gdcfh"`Ni XYa\Uh`Yf`g]W\`ni a `Gdcfhh\YfUdYi hYb`Ui gV]`XYb``UggYb`i bX`V]`XYhg]W\`XYfnY]h`ni a `9fbÀ\fi b[gVYfUhYf`kY]hYf"`6]g'j cf`Y]bYa `\U`VYb\J\f`k Uf`Yf`U`g'?cbghfi _hYi f`hÀh][ž`]gh`Yhnh`YXcW\`UfVY]hggi W\YbXbUW\`Y]bYf`?ØbX][i b[`]b`XYf`DfcVYnY]h"

9b[U[Ya Ybh'i bX'N]Y`Y

; $Agg^Yf^Yb[U[]Yfh^g]WX^U_h]j^ZØf^X]Y^Cf[UbgdYbXY''^9f^jYfhY]^h$ $Cf[UbgdYbXYfUigkY]gY^ibX^gYhnh^g]WX^ja^6ØbXb]g^Dfc^HfUbgd^Ubh XUZØf^Y]b^Z^XUg^6Yk^igghgY]b^ZØf^X]Y^6YXYihib[^jcb^Cf[UbgdYbXYbni^Yf\O\Yb''^9f^_f]h]g]Yfh^X]Y^Dc^]h]_^gWXUfZ^ZØf^X]Y^ibnifY]WXYbXYb AU*bU\aYb^ibX^X]Y^?cad^Yl]hAh^XYg^Cf[UbgdYbXYfY[]ghYfg'' <math>XYYb^HU[^ghYfVYb^XfY]^AYbgWXYb^UiZ^XYf^KUfhY^]ghY^Z^kUfbh^YfibX^ibhYfghfY]WXh^XUa]h^X]Y^8f]b[^]WX_Y]h^XYg^H\YaUg''$

Ni 'gY]bYa '(\$"'; YVi fhghU['\Uh'; Àgg`Yf'Ua V]h]cb]YfhY'N]Y`Y. '9f d`Ubhž'Y]bYb'[fc» Yb'6Yf['ni 'VYghY][Yb'i bX'Ub'Y]bYa '≢cba UbhY]`ni bY\a Yb"'8]YgY'_ÒfdYf`]W\Yb'< YfUi gZcfXYfi b[Yb'a ÒW\hY'Yfb]W\h'bi f'VYk À`h][Ybž'gcbXYfb'Ui W\'U`g'Gma Vc`'ZØf'gY]bYb'?Ua dZia g'¸ VYf`YVYb'i bX'X]Y'I bhYfghØhni b['UbXYfYf'bi hnYb"

< YfnhfUbgd`UbhUh]cbYb`U`g`<cZZbib[

@Ui h' \(\frac{1}{2}\) Zcfa Uh]cbYb'j cb'cf[UbgdYbXY!]bZc'k]fX'Y]bY < YfnhfUbgd`UbhUh]cb']b'8 Yi hgW\`UbX']a a Yf'XUbb']b'6YhfUW\h [Ync[Ybž'k Ybb'X]Y' < YfnZi b_h]cb'Y]bYg'DUh]YbhYb'ghUf_ VYY]bhfÀW\h][h']gh'i bX'UbXYfY'h\YfUdYi h]gW\Y'Cdh]cbYb'b]W\h a Y\f'Ui gfY]W\YbX'k]f_Yb'_\ObbYb''; YfUXY']b'; \(\hat{A}gg\Yfg': U\)`_\ObbhY'Y]bY'HfUbgd\`UbhUh]cb'gY]bY'@YVYbgei U`]h\h'Yf\YV`]W\\ghY][Yfb'i bX']\a'bYi Y'DYfgdY_h]j Yb'Yf\OZZbYb'''9g']gh'Y]b'\N]Y`\'z'XUg\Yf'a]h'U\)`Yf'9bhgW\`cggYb\Y]h'j YfZc\`[h''

'5bVYhfUW\h'X]YgYf'I a gh\h\bXY']gh'5bXfYUg'; \hat\gammagg\Yfg'; YgW\]W\h\ b]W\h'bi f'Y]b'Y]bXf]b[\cdot]W\Yf'5ddY\cdot\Z\Of\Y]bY']bhYbg]j YfY 8]g_i gg]cb'\OVYf'Cf[UbgdYbXYb\text{z'gcbXYfb'Ui W\'Y]b']bgd]f]YfYbXYg 6Y]gd]Y``ZØf`8ifW\\U`hYjYfa Ò[Yb'ibX'@YVYbgk]``Yb"'8YfibYfa ØX`]W\Y'9]bgUhn`ZØf`gY]b'Y][YbYg`Kc\`VYZ]bXYb'ibX`XUg`XYfUbXYfYb'jYfXYih`]W\hžk]Y'k]W\h]['Yg']ghž']b'XYf';YgY``gW\UZh`XUg

8]Y'<YfUi gZcfXYfi b[ž'X]Y'5bXfYUg'; Àgg`Yf'ØVYf'*J\\fY'\]bk Y[
VYk À`h][h'\Uhž']gh'ZØf'X]Y'a Y]ghYb'A YbgW\Yb'i bj cfghY``VUf"'8cW\
gY]b'9b[U[Ya Ybh'i bX'gY]bY'dcg]h]j Yb'N]Y`Y'nY][Ybž'XUgg'gY`Vgh
X]Y'k]Xf][ghYb'I a ghÀbXY'ØVYfk i bXYb'k YfXYb'_ÒbbYb"

A Y\f'\dagg Zcfa Uh]cbYb'\@VYf'X]Y'FY`Yj Ubn'i bX'XYb'DfcnYgg'XYf < YfnhfUbgd`UbhUh]cb'Z]bXYb'G]Y'Ui Z'cf[UbgdYbXY!]bZc"XY"

8 Y hU]`g	
J c f ZU``	; Ygi bX\Y]hg_f]gY
Cfh	JYf]b[YbXcfZž'8YihgW\`UbX
EiY``Yb	• k k k "g\\\\ k UYV]g\\\\ Y"XY
	k k k "cf[UbgdYbXY!]bZc"XY

6Ygi WXYb G]Y i bg Ui Z. b!U["bYh