

6YghY][ib['XYf'g]YVYb';]dZY`.'Y]b'K Y[bUWX'cVYb

8]Y'GYj Yb'Gi a a]hg' 'X]Y'\ÒW\ghYb'6Yf[Y'U``Yf'?cbh]bYbhY' 'ni VYghY][Ybž']gh'Y]b'i bk U\fgW\Y]b`]W\Yf'HfUi a 'j cb'a]f' 'UVYf'XUg]gh'XUg'GW\ÒbY'Ub'HfÀi a Yb

#W. `\UVY `HfY__]b['i bX'? `YhhYfb'gW\cb']a a Yf'[Y`]YVh"
Bcfa U`Yfk Y]gY'j YfVf]b[Y']W\'YXYg'\\fa Y\fYfY'K cW\Yb'Ui Z
XYb'GhY][i b[Yb'XYf'gW\chh]gW\Yb'<][\`UbXg'cXYf'XYg'k U`]g]gW\Yb
Gbck Xcb]U'cXYf']XYU`Yfk Y]gY'k Y]hYf'YbhZYfbhž'k]Y'XYa '5fWh]W
7]fWY'HfU]`']b'; fÒb`UbX'cXYf'XYa '? &'6UgY'7Ua d'HfY_']b
DU_]ghUb"</pre>

9g'k Uf'Y]bY'X]YgYf'HfY__]b[fY]gYb'''&\$\\$\bUW\'HUbgUb]U'''X]Y Yhk Ug'BYi Yg']b'a]f'YbhZUW\h'\Uh''K À\fYbX'XYf'6YghY][i b['XYg ?]`]a UbXgW\Ufcž'XYg'\ÒW\ghYb'6Yf[Yg'5Zf]_Ugž'VY[Ubb'g]W\'Y]bY \Rightarrow\Y\Z'Y]b'9\f[Y]n'ni 'Zcfa i `]YfYb" A Y]b'<cVVm'k i fXY'ni f'@Y]XYbgW\UZhi bX'a]f'k i fXY'_`Ufž'XUgg']W\ Yhk Ug'; fc»Yg'YffY]W\Yb'k c``hY.'X]Y'GYj Yb'Gi a a]hgž'X]Y'\ÒW\ghYb 6Yf[Y'U``Yf'?cbh]bYbhYž'ni 'VYghY][Yb"

6Yf[?cbh]bYbh	< Ò\ Y	HYWXb]_"
			GWk]Yf][_Y]h
A ci bh'9j YfYgh	5g]Yb	, ", (, `a	8 Unk]gW\Yb`]Y
		f&- "\$&- ': i » Ł	[YbX
5WcbWU[iU	GØXUa Yf]_U	* "- * % a	9]bZUW
		f&&", ' , ': i »Ł	
8 Y b U`]	BcfXUa Yf]_U	* "%- (`a	8 Unk]gW\Yb`]Y
		f&\$"' &&': i »Ł	[YbX
?]`]a UbXgWXUfc	5 Zf]_U) ", -) `a	9]bZUWX
		f%-"" (%:i»Ł	
8Yf'9`Vfig	9i fcdU) "* (& a	9]bZUW
		f‰, ") %\$: i » Ł	
6Yf['J]bgcb	5bhUf_h]g	(", - & a	8 Unk]gW\Yb`]Y
		f%*"\$) \$::i »Ł	[YbX
Di bWU_'_UmU	CnYUb]Yb	(", , (`a	: cfhgWXf]hh`]WX
		f%*"\$&(': i »Ł	

@Ub[Y'NY]h'V`]YV'Yg'b]W\h'a Y\f'U`g'Y]b'?cbnYdh"'8Ubbž'bUW\g]YVYb'À\f][Yf'K UfhYnY]hž'VYgh]Y[']W\'XYb'9`Vfi g']b'Fi gg`UbXž'XYb\OW\ghYb'6Yf['9i fcdUg"

 $8fY]^* + J + fY \cdot gdAhYfZ^* + & $&$Z^*[]b[^]WX \cdot bUWX \cdot 5f[Ybh]b]Yb^*i bX^*VYgh]Y[XYb^*5WCbWU[i UZ^*XYb^* + OWXghYb^*6Yf[^*GØXUa Yf]_Ug^*i bX^*a Y]bYbXf]hhYb^*XYf^*g]YVYb^*;]dZY^*"$

&\$%, `\UVY`]W\`Ui W\`?cgW]i gn_c`]b`5i ghfU`]Yb`VYgh]Y[Ybž'UVYf`XUgnÀ\`Y`]W\`b]W\h'XUni ž'XU`]W\`a]W\`Ui Z'X]Y` A YggbYf!@]ghY `hfU[Yžk Ug`VYXYi hYhž'XUgg`?cgW]i gn_c`_Y]b`G]YVYb[]dZY``]gh"

C\bY`Nk Y]ZY``]gh'?cgW]i gn_c`XYf`\ÒWkghY`6Yf[``Ui Z`XYa Ui ghfU`]gWkYb`: Ygh`UbX"`8Yf`\ÒWkghY`6Yf[``Ui Z`XYa `k Y]hYfYb Ui ghfU`]gWkYb`?cbh]bYbh`fCnYUb]YbŁ` `ni `XYa `5i ghfU`]Ybž
BYi gYY`UbX`i bX`HUi gYbXY`j cb`\bgY`b`]a `\bX]gWkYb`i bX
DUn]Z]gWkYb`CnYUb`[Y\ÒfYb``]gh`YXcWk`Di bWU_\\$JmU`fl7UfghYbgn!

?cbh]bYbh 8]Y'AYggbYf! 8]Y'6Ugg!JYfg]cb JYfg]cb

5g]Yb	9j YfYgh	9j YfYgh
GØXUa Yf]_U	5WcbWU[iU	5WcbWU[iU
BcfXUa Yf]_U	8YbU`]	8 Y b U`]
5 Zf]_U	?]`]a UbXgW\Ufc	?]`]a UbXgWXUfc
9i fcdU	9`Vfi g	9`Vfi g
5bhUf_h]g	J]bgcb	J]bgcb
C nYUb]Yb	Di bWU_'*JJmU'f17 UfghY	?cgWji gn_c
	bgn!DmfUa]XYŁ	

6YghY][ib[XYf GYj Yb Giaa]hg

 $\label{eq:continuous_continuou$

#W. `\ UVY `gc ni gU[Yb `X]Y ` V]``][Yb `i bX ` Y]bZUWXYb
Xi fWX [Yghf]WXYb"'?]`]ž'9`Vfi g'i bX `5 WcbWU[i U `g]bX `U``Y `fY`Uh]j
`Y]WX h`ni [Àb[`]WX `i bX `YfZcfXYfb `_Y]bY `Zcfh[YgWXf]hhYbYb
6Yf[ghY][YfZÀ\][_Y]hYb `cXYf `GdYn]U`Ui gV]`Xi b[ž'k Ug'Ui WX `XUni
VY]hfÀ[hžX]Y ?? cghYb `ZØf']\ fY `6YghY][i b[`fY`Uh]j `b]YXf][`ni `\ U`hYb"

 $8]Y'j YfV`Y]VYbXYb' `8YbU`]ž'9j YfYghž'Di bWU_'*JmU'i bX'J]bgcb' Vf]b[Yb'U``Y']\fY'Y][YbYb'Y]bn][Ufh][Yb'<YfUi gZcfXYfi b[Yb'a]h g]W\ž'gY]'Yg'Y]b'hYW\b]gW\Yf'HYghž'ZY]bX`]W\Y'K YhhYfVYX]b[i b[YbžgW\`YW\hY'Ni [Åb[`]W_Y]h'cXYf'<<math>O$ \Y"

9]bYg'\UVYb'U``Y'6Yf[Y'[Ya Y]bgUa .'G]Y'g]bX'hYi Yf'ni Yf_`]a a Yb"

#\\ 'VY\Ui dhY 'b]\\\hž'U``Y '5bhk cfhYb 'ni '\UVYbž'UVYf']\\\ \\UVY
Ghi bXYb'i a 'Ghi bXYb'XUa]h'j YfVfU\\\h'ni 'fY\\\Yf\\\]YfYbž'k]Y']\\\\
a Y]bYb'HfUi a 'j Yfk]f_`]\\\Yb'_Ubb'' =a ': c`[YbXYb'`]ghY']\\\'Ui Zž

 $k]Y]WX fi bX UbXYfY k]Y]WX £ X]Y VYghY b 7 \ UbWY b `\ UVY b ž X]Y g]YVY b ;]dZY ``ni `VYghY][Yb 'i bX 'i bgYfY b 'i bk U\fgWXY]b `]WXY b HfUi a 'ni 'j Yfk]<math>f_{-}$]WXY b "

%"'?]`]a UbXgWXUfc

GhUbXcfh. '5Zf]_U'fHUbgUb]UŁ'< O\Y.') ", -) 'a 'f%- "' (%'ZhŁ FY]WkY]hY.'_Y]bY' 'ZfY]ghY\YbX'8Ui Yf.') *'HU[Y'6YkYfhi b[.'H%?cghYb.'&"\$\$\$'`

'U`h1 DYhYf'Ui Z'XYa ';]dZY``XYg'?]`]a UbXgWXUfc']b
HUbgUb]U 25h`Ug'/ '6cchg'5i Z'XYa ';]dZY``XYg'?]`]a UbXgWXUfc']b
HUbgUb]U

K UgʻZØfʻY]bʻ6Yf['ZØfʻXYbʻ5bZUb["'8Yfʻ?]`]a UbXgWkUfcʻ]ghʻY]bYf XYfʻgWkÒbghYbʻ6Yf[YʻXYfʻK Y`h"'9gʻ]ghʻXYfʻ\ÒWkghYʻZfY]ghY\YbXY 6Yf['XYfʻK Y`hʻi bXʻYfZcfXYfh'_Y]bYʻ9fZU\fi b[']a '6Yf[ghY][Ybž'XU YgʻUVgc`i hʻb]WkhʻhYWkb]gWkʻ]gh"

5```XUg`a UW\h'Yg`ni a ']XYU`Yb`9]bgh]Y[']b`X]Y`K Y`h'XYf'< \dot{O} Yb! i bX`A Y\fhU[YgYI dYX]h]cbYb"

- 6YghY][ib['XYg'?]`]a UbXgW\Ufc.'5Zf]_Ug'\OW\ghYf';]dZY`
- HfU]b]b['ZØf'XYb'?]`]a UbXgWkUfc.'+'H]ddg'ZØf'Y]bYb YfZc`[fY]WkYb';]dZY`

9g'k Uf'XYf'YfghY';]dZY``a]h'g]YVYb';]dZY`bžXYb']W\`UVgc`j]Yfh\\UVYž'i bX'Yg']gh'VY]'k Y]hYa 'XYf'Y]bZUW\ghY'''9g'[]Vh'a Y\fYfY\'Y]W\hY'V]g'a]hhY`gW\k YfY'Fci hYb'ni a ';]dZY`ž'X]Y']\b'ni 'Y]bYf'XYfVY`]YVhYghYb'K UbXYfi b[Yb'XYf'K Y`h'a UW\Yb' 'Yfk UfhYb'G]Y'U`gcb]W\hž'XYb'K Y['ZØf'g]W\'U``Y]b'ni '\UVYb"

?ifg $^{\circ}$ 9]bZ $^{\circ}$ \fib[$^{\circ}$]bg $^{\circ}$ K]bhYfVYf[ghY][Yb $^{\circ}$

 $B \ UWX \ XYa \ ??]`]a \ Ub \ XgWX \ Ufc \ j \ YfV f UWX \ hY \]WX \ ZØb Z \ HU[\ Y \ a \]hhYb \]a \\ K \]b \ hYf \]b \ XYb \ gWX \ c \ hh]gWX \ Yb \ <][\ \ `Ub \ Xg'i \ b \ X \ `Yfb \ hY \ [fi \ b \ X \ Y[\ Yb \ XY \ GhY][\ Y]gYb! \ z'9]gd]W_Y`! \ i \ b \ X \ GY]`hY \ WX \ b]_Yb " 8 \ Ug \\ HfU]b \]b [gdfc [fUa \ a \ VY \ ZUgghY \ g]WX \ Ui \ WX \ a \]h'? `YhhYf_bc \ hYb \ z'$

#W. 'V]b '*J[[YX'; `cVY'ZØf'Y]bYb' 9]bZØ\fi b[']bg
K]bhYfVYf[ghY][Yb !?i fg'VY][YhfYhYbž'UVYf'Yg'[]Vh'j]Y`Y
9]bf]W\hi b[Ybž'X]Y'À\b`]W\Y'?i fgY'UbV]YhYb"'8]Y'Yi fcdÀ]gW\Yb
5`dYb'cXYf'XYf'A ci bh'FU]b]Yf']b'XYb'I G5'g]bX'VY`]YVhY
5i gk Y]W\n]Y`Y"

&"'9`Vfi gVYf[

Cfh. '9i fcdU'fFi gg`UbXŁ' < Ò\Y.') "* (&'a 'f%, ") %\$ 'ZhŁ'FY]W\kY]hY. ?Ui _Ugi g!; YV]f[Y'8Ui Yf.'+'HU[Y'6Yk Yfhi b[.'%'7'?cghYb. &"\$\$\$!("\$\$\$'`

'U`h1 6YghY][ib['XYg'GYjYb'Giaa]hg'9`Vfig 25h`Ug'/'6cchg DYhYf'UiZ'XYa';]dZY`'XYg'9`Vfig

- 6YghY][ib['XYg'9`Vfig.'a Y]b'nk Y]hYf'G]YVYb[]dZY`
- 9`Vfi g!5i gfØghi b[g`]ghY. '5``Ygž'k Ug'G]Y 'VfUi W\Ybž'i a
 9i fcdUg'\ÒW\ghYb';]dZY``ni 'VYghY][Yb

→W. 'gWX `cgg'a]WX 'XYa 'fi gg]gWXYb 'GYj Yb 'Gi a a]hg!GdYn]U`]ghYb'+
Gi a a]hg'7`i V 'ZØf'Y]bY'UWXhhÀ[][Y'6YghY][i b['XYg'K Ygh[]dZY`g
Ub"

' "5 Wc b WU[i U

Cfh. 'GØXUa Yf]_U'fbf[Ybh]b]YbŁ< O\Y. '* "- * & 'a 'fk&\", (%'ZhŁ6YfY]W\. 5bXYb8Ui Yf. '%(!%+ 'HU[Y6Yk Yfhi b[.'%5?cghYb.'`) "\$\$\$!+"\$\$\$

'U`h1]bhYfYggUbhY': U_hYb'ØVYf'5WcbWU[iU 25h`Ug'/ '6cchg'DYhYf
Ui Z'XYa';]dZY`'XYg'5WcbWU[iU

 $8 \ Yf'nk \ Y]h\ \grave{O}W\ ghY'; \]dZY``XYf'G]YVYb'i bX`XYf'\ \grave{O}W\ ghY'6Yf[$ Ui » \ Yf\U`V'5g]Ybgž'5 \ Wcb\WU[i Už']gh'Y]b'g\ØbX\UZh'\c\Yf'6Yf[''8]Y F ci hY']gh'b]\W\ h'hY\W\ b]g\W\'i bX'k]fX'c\Zh'U`g'\ \grave{O}W\ ghYf HfY__]b[[]d\ZY``XYf'K\ Y`h\ 'VYnY]\W\ bYh''

- 6YghY][ib['XYg'5WcbWU[iU.'a Y]b'Xf]hhYf'G]YVYb[]dZY`
- 5 WcbWU[i U!5i gf@ghi b[g`]ghY. '5``Ygž'k Ug'G]Y 'Z@f'XYb
 ;]d ZY`YfZc`['VfUi W\Yb
- K]Y a Ub XYb 5WcbWU[i U VYghY][h 'U Y → fY : fU[Yb VYUbhk cfhYh

⇒XYU`Yfk Y]gY`k ØfXY`Yg`gdÀhYf`]a `Dfc[fUa a `Ui Z`XYa `K Y[`ni f cXYf`j cb`XYf`6YghY][i b[`j cb`J]bgcb`]b`XYf`5bhUf_h]g`VYgh]Y[Yb k YfXYb"`5``YfX]b[g`\UVY`]W\`XYfnY]h`f\Už`k YfXY`]W\``Ya U`g3Ł_Y]bYb`Ni [Ub[`ni `XYa ; Y`Xž`XUg`ZØf`J]bgcb`VYbÒh][h`k]fXž`U`gc k Uf`Yg`XYf`bÀW\ghY``c[]gW\Y`GW\f]hh`ZØf`a]W\"

±W.`\UVY`XYb`5WcbWU[iU`ØVYf`X]Y`BcfaU`fcihY`a]h`5WcaUfU 5WcbWU[iU`9IdYX]h]cbg`VYgh]Y[Yb"

K]bhYfVYf[ghY][Yf_i fg'ZØf': cfh[YgWXf]hhYbY'#
: cfh[YgWXf]hhYbY

5`gʻbÀWkghYgʻa ÒWkhYʻ]Wkʻa Y]bYʻ: À\][_Y]hYbʻ]a

K]bhYfVYf[ghY][Ybʻj YfVYggYfb"'→Wk'_ÒbbhYʻY]bYbʻA]hhY`!ʻi bX
: cfh[YgWkf]hhYbYb_i fgʻ]bʻGWkchh`UbXʻcXYfʻXYbʻYi fcdÀ]gWkYb
5`dYbʻ_ca V]b]YfYbžʻUVYfʻ]XYUʻYfk Y]gYʻbY\a Yʻ]Wk'UbʻY]bYa
8YbU`]!JcfVYfY]hi b[g_i fgʻUa ʻA ci bhʻFU]b]YfʻhY]`"

 $\label{eq:normalize} $$N]Y^*]ghYgžaY]bYGhY][Y]gYb!žD]W_Y^!'ibX'GY]^ZA^{[_Y]hYb'kY]hYfni'jYfZY]bYfb'ibX'aY^f9fZU^fib['VY]a'?^YhhYfb'UiZ'jYf[^YhgWXYfhYb';]dZY^b'ni'gUaaY^b''$

CVYf`UbX'(\$\$\$Yf'#Acbh'6`UbW

 $8] Yg`] gh`cdh] cbU`ž`UVYf`] W`aU[`X]Y` \not= XYY \check{z}`X]Y` cVYb`Yfk cfVYbYb : A`\][_Y]hYb`]a`JcfZY`X`jcb`8YbU`]`gc`Zf]gW`k]Y`aÒ[`]W\`ni`U`hYb"$

9]bY'FY]gY']b'X]Y'5`dYbži a 'Ybhk YXYf'Y]b][Y'XYf'CVYf`UbX ("\$\$\$Yf'cXYf'XYb'Acbh'6`UbWni 'VYghY][Ybž'V]YhYh'X]Y'dYfZY_hY; Y`Y[Yb\Y]hž'aY\f'HfU]b]b['ni 'Yf\U`hYb'i bX'g]W\Yfni ghY``Ybž XUgg'aY]bY'GY]`UfVY]h']bhi]h]j ']ghž'k Ybb']W\'a]W\'a]h'8YbU`]VYZUqqY"

("'8YbU`]

Cfh 'BcfXUa Yf]_U'fl G5Ł'< O\Y.'* "%- ('a 'f&\$"' && 'ZhŁ'FY]W\k Y]hY. 5`Ug_U'FUb[Y'8Ui Yf.'&%!&* 'HU[Y'6Yk Yfhi b[.'' 8'?cghYb.'jcb, "\$\$\$'V]g'%\$"\$\$\$'`

"U`h1 6YghY][ib['XYf'g]YVYb';]dZY``Y]bY'FcihY'nia';]dZY``
8YbU`] 2 HfUi a nY]h'8]Y'@U[Y'j cb'8YbU`]']a '\c\Yb'BcfXYb'a UW\h
Yg'ghØfa]gW\'i bX'i bVYfYW\YbVUf

±W. `\UVY'j cfž'U`g'bÀW ghYg'8YbU`]']b'5b[f]ZZ'ni 'bY\a Ybž'XU'Yg Yhk Ug'V]``][Yf']gh'U`g'Di bWU_'±JmUž'UVYf'UbXYfY'n]Y\Yb'Yg j]Y``Y]W\h'j cfž'Yg'i a [Y_Y\fh'ni 'a UW\Yb"

8 Y b U`] ']gh'k c \``XYf'nk Y]hg\\k |Yf][gh\Y'6\Yf['X\Yf'G\Yj Y b 'Gi a a]hg" 9g']gh'\Y]b\Y'\Ufh\Y'? Ua d U[b\Y\Z'\X\U'\X]\Y'? \Yhh\Yf\Yf'ni '6\Y[]bb'\X\Yf 9I d\Y\X]h]c b 'g\\k \Yf\Y'@\Ugh\Yb'\hf\U[\Yb'\gck]\Y'5i gf\Øghi b['i b\X'\Jcff\h\Y Ui Z'\G\\\`]hh\Yb'\hf\Ubgdcfh]\Yf\Yb'a \Øgg\Yb"

8 Ugʻbchcf]gWXʻghØfa]gWXYʻi bXʻi bVYfYVXYbVUfYʻK YhhYfʻUi ZʻY]bYa 6Yf[ʻUi Zʻ*' ...:BcfX` ʻXUgʻg]bXʻbi fʻ' ...; fUXʻgØX`]WXʻXYg Dc`Uf_fY]gYgʻ a UWXhʻX]YʻGUWXYʻbi fʻbcWXʻgWX`]a a Yf"'8YfʻJcfhY]`]ghž'XUggʻYgʻX]YʻdYfZY_hYʻJcfVYfY]hi b[ʻUi ZʻJ]bgcbʻ]gh"

?`YhhYf_i fg

6Yj cf']WX 'Di bWU_'*JmU'j Yfgi WX Yž'd`UbY']WX ž'a Y]bY
?`YhhYfZÀ\][_Y]hYb'ni 'j YfVYggYfb'i bX'Ub'GdYn]U`hYWXb]_Yb'k]Y
XYa '** a Uf]b['Y]bYg'\Àb[YbXYb'GY]`g'ni 'UfVY]hYb"'9g'[]Vh
a Y\fYfY'?i fgY']b'; fc»Vf]hUbb]Ybž'9i fcdU'cXYf'BcfXUa Yf]_U"

) "'Di bWU_'>UmU

"U`h1 6YghY][ib["XYf'GYjYb'Giaa]hg'DibWU_'\JmU 2 K UmbY A cff]g#G\i hhYfghc\W_'Dib\WU_'\JmU']gh'k U\fg\W\Y]b`]\W\'X]Y hY\W\b]g\W\ghY'6YghY][ib["XYf'g]Y\Yb';]d\ZY`

Di bWU_'*JmUž'cXYf'7UfghYbgn!DmfUa]XYž']b'*bXcbYg]Yb']gh k U\fgWXY]b`]WX'XYf'hYWXb]gWXghY'5i Zgh]Y['XYf'g]YVYb';]dZY`ž'i bX ?`YhhYfYf'a ØggYb']b'XYf'@U[Y'gY]bž'g]WX'UVni gY]`Yb'i bX'Ub'Y]bYa \Ab[YbXYb'GY]`ni '1 a UfYb"'CVk c\`'Yf'XYf'b]YXf][ghY'XYf'g]YVYb ;]dZY``]ghž'gc``hY'Yf'b]WXh'i bhYfgWXAhnh'k YfXYb"

8 Ugʻ9ffY]WXYbʻXYgʻ6Yf[Ygʻ]ghʻY]bYʻ< YfUi gZcfXYfi b[ʻZØfʻg]WX": fØ\Yfʻj YfVfUWXhYbʻ9I dYX]h]cbYbʻa Y\fYfYʻHU[YʻXUa]hžʻni a 6Ug]g`U[Yfʻni k UbXYfbžʻUVYfʻ\Yi hni hU[Yʻn]Y\YbʻYgʻX]Yʻa Y]ghYbHYUa gʻj cfžʻa]hʻXYaʻ<i VgWXfUi VYfʻY]bni Z`]Y[Yb"

 $8]Y ?? cghYb `gWXY]bYb `ghUf_`ni `j Uf]]YfYbž'k cVY]`Y]b][Y 9I dYX]h]cbYb `Y]bYb `DfY]g'j cb `ØVYf'&$"$$$`I G!8c``Uf'\UVYb" @c_U`Y `5i gfØghYf'g]bX `Ui gbU\a g`cg`V]``][Yf"'<math>\Rightarrow$ W `\UVY'6Yf]WXhY j cb `Y]b][Yb `[Y\ Ofhž'X]Y `Y]bY `9I dYX]h]cb `ZØf'bi f'+") \$\$`8c``Uf cf[Ub]q]Yfh`\UVYb"

* "A cbh]YfYb G]Y J]bgcb

 $C fh ~5bhUf_h]g<O\backslash Y.~(", -&`a~ff%*"$) $`:i~k`FY]WkkY]hY.~GYbh]bY`FUb[Y8UiYf.~%,~HU[Y~6YkYfhib[.~&6~?cghYb.~($"$$$!*$"$$$"$

"U`h1 6YghY][ib['XYg'GYj Yb'Gi a a]hg'J]bgcb
& 2 \ hhdg.##k k k "g\i hhYfghcW_"Wca #d\chcg'J]bgcb']gh'b]W\\h
hYW\\b]gW\\ 'j Yfg]Yfh\(\frac{x}{U}\)Yf'k Y]h'k Y['j cb'U``Ya

J]bgcbi]ghiXYfi`YhnhYiXYfig]YVYbibcWini YbhXYW_YbXYbi;]dZY`ibXiYf\YVhig]Wijca ZY]bXgY`][ghYbži]gc`]YfhYghYbiibXiXcWibVYfØ\fhYghYbi?cbh]bYbhiXYfi9fXY"8]YgYfi`Ub[Yi5bgh]Y[žcVkc\``hYWb]gWiacXYfUhžigc``hYib]WihiZU`gWiY]b[YgWiAhnh

8]Y?ca V]bUh]cb'Ui g'5V[YgWk]YXYb\Y]h'i bX'dchYbn]Y``'Yl hfYa Yb 6YX]b[i b[Yb'VYXYi hYhž'XUgg'G]Y'VYhfÀWkh']WkY'9fZU\fi b[']a 6Yf[ghY][Yb'VYbÒh][Ybž'i a 'X]YgYb'6Yf['ni 'VYk À`h][Yb"'Jcb'Xcfh i bhYb']gh'Yg'Y]b'`Ub[Yf'K Y[ž'gcXUgg'YXYg'?`YhhYfhYUa'k À\fYbX XYf'[YqUa hYb'9IdYX]h]cb'j Ò``]['Ui hUf_'qY]b'a i qq"

7\c'Cmi ž'BYdU`

< Ò\Y.`, "&\$%"a "f&*"- \$* "Zh£"8 Ui Yf."(\$"HU[Y

<]Yf']gh'X]Y' GW\Y]bdfØZ b['ZØf'9j YfYgh"8 Ug'< cW\`U[Yf'`]Y[h'Ui Z
+"(\$\$'a' 'j]Y`\\O\Yfž'U`g']W\'ni j cf'[YnY`hYh'\UVY"'<]Yf'a i gg']W\
XYb'I a [Ub['a]h'GUi YfghcZZ'ØVYb'i bX'a Y]bY'?`Y]Xi b['i bX
5i gfØghi b['j YfZY]bYfb"</pre>

9gʻ]ghʻUa ʻVYghYbžʻ7\cʻCmi ʻa]hʻY]bYfʻ; fi ddYʻj cbʻ6Yf[ghY][Yfbʻni j Yfgi W\YbžʻX]YʻUi W\`VU`Xʻni a ʻ9j YfYghʻ[Y\Yb"; Ya Y]bgUa _\ObbYbʻk]fʻi bgYfYʻ7\UbWbʻUa ʻ9j YfYghʻYf\O\Yb"ʻ9gʻ]gh Yfk À\bYbgk YfhžʻXUggʻXYfʻ7\cʻCmi ʻXYfʻgYW\gh\OW\ghYʻ6Yf[ʻXYf K Y`hii bX`XYfʻUa `\Ài Z][ghYbʻVYgh]Y[YbYʻ5W\XhhUi gYbXYfʻ]qh"

+"A ci bh'9j YfYgh

Cfh. '5g]Yb 'fB Yd U`#7\]bUŁ'< Ò\Y.', ", (, 'a 'f&- "\$&- 'ZhŁ'F Y]Wk K Y]hY. <]a U`UmU'8 Ui Yf.'* \$'HU[Y'6Yk Yfhi b[.'(9'?cghYb.')\$"\$\$\$!+) "\$\$\$

'U`h1 8Yf';]dZY``XYg`A ci bh'9j YfYgh'j ca '6Ug]g`U[Yf'Ui g
[YgY\Yb 25h`Ug'/ '6cchg'8Yf'9j YfYgh']gh'XYf'\ÒW\ghY'6Yf['XYf
9fXY

8 Yf; fcggY"8]Y 'Gci h\ '7c``Fci hY'j cb'BYdU``V`Y]Vh'X]Y
fYU`]gh]gW\ghY`Fci hY"'9g`]gh'hYW\b]gW\ 'Y]bZUW\Yf'i bX'a]h'XYa 'Hcd!
7 Ua d'Ui Z'_bUdd', "\$\$\$'a 'VYXYi hYh'Ygž'XUgg'? 'YhhYfYf'k Yb][Yf
NY]h']b'XYf' HcXYgncbY 'j YfVf]b[Yb"8]Yg`]gh'a Y]bY'VYghY
7 \UbWYž'XYb'GU[Ufa Ýh\Ýni 'VYghY][Yb"

CVk c\``g]W\`X]Y '9fZc`[g! 'i bX', VYf`YVYbgfUhYb']b 'XYb '`YhnhYb \\\fnY\bhYb 'XfUa Uh]gW\'j YfVYggYfh`\UVYbž'a UW\Y']W\` 'a]f'_Y]bY A]bi hY 'Yhk Ug'j cf"'5V'A Àfn'&\$%- 'XYi hYb'5i ZnY]W\bi b[Yb'XUfUi Z\]bž'XUgg'Yg'Ua '9j YfYgh'ØVYf'&, \$'HcXYgZÀ``Y'[Y[YVYb'\Uh fk U\fqW\Y]b`]W\' '&, , \\\ L' '+&'qY]h'&\$\%\$"

 $K Y]hYfY''\%'ghUfVYb''k Å\fYbX'Y]bYf'ØVYfZØ``hYb'`GU]gcb'`&$\%- "'8]Yg \\]gh'XYf'\ ÔW,ghY'`6Yf['XYf'9fXY'i bX'i b[`Ui V`]W.' [YZÅ\f`]W.' " \\ K ØbgW.'a]f'; `Ø_" "$

<]bk Y]qY ni f 6 YqhY][i b[XYf GYj Yb Gi a a]hq

- 8]Y'?cghYb'k YfXYb'gc'VYfYW\bYhž'XUgg': `i [dfY]gY'Ui g XYa 'JYfY]b][hYb'?Òb][fY]W\'Ybh\U`hYb'g]bX"
- Ni gàhn`]W\Y'GW\i`i b[Yb'k àfYb'fbUhØf`]W\Ł'j cb'JcfhY]`"
 Jcf'U``Ya 'a Y\f'5`d]b!'i bX'<Ò\YbdfUl]q"
- 8]YgYg'Dfc[fUa a 'VUg]Yfh'Ui Z'XYf'A YggbYf!'cXYf
 7UfghYbgn!@]ghY'i bhYf'XYf'5bbU\a Yž'XUgg'XYf'\ÒW\ghYDi b_h']b'CnYUb]Yb'XYf'Di bWU_'*JmU']b'*=bXcbYg]Yb'i bXb]W\h'XYf'A ci bh'?cqW|i qn_c']b'5i ghfU`]Yb']gh"

 $"U\h1 = VYghY][ib["XYf"g]YVYb"[]dZY`"d]bhYfYgh 2$

9]bY'\Yfj cffU[YbXY'5bU`mgY'XYf'Y]bnY`bYb';]dZY`'Z]bXYb'G]Y i bhYf'5'; i]XY'hc'9UW\'7cbh]bYbhg'<][\Ygh'DYU_'XYg dfcZYgg]cbY``Yb'6Yf[ZØ\fYfg'A]_Y'<Ua]``"

@Y]hV]`X.~5h`Ug~/~6cchg