

9]a gVØhhY`. '* \$!≯À\f][Yf'j Yfi fhY]`h' GWXcW_]YfYbXY'BUW_hZchc!5ZZÀfY°

9]b'*\$!À\f][Yf'Ui g'9]a gVØhhY`k i fXY'j Yfi fhY]`hž'bUWXXYa Yf'BUW_hV]`XYf'Y]bYf'%*!À\f][Yb'YfdfYggh'\Uh" 6Yk À\fi b[gghfUZY'j Yf\Àb[h"



9]a gVØhhY`ž'8Yi hgW\`UbX'!'\\D'Y]bYa 'Ui ZgY\YbYffY[YbXYb': U``\UhXUg'5a hg[Yf]W\h'< Ua Vi f['Y]bYb'*\\$!\\A\f][Yb'A\Ubb'Ui g

9]a gVØhhY`'j Yfi fhY]`hž'XYf'Y]bY'%*!\A\f][Y'ØVYf'Y]bY'Ei]n!5dd
_cbhU_h]YfhY''8Yf'JYfi fhY]`hY'[UV'g]W\'U`g': fUi 'Ui g'i bX

a Ub]di `]YfhY'X]Y'\Rightarrow [YbX`]W\Y'XYfUfhž'XUgg'g]Y'g]W\']b'X]YgY'Z]_h]j Y

DYfgcb'j Yf`]YVhY''', VYf'Y]bYb'NY]hfUi a 'j cb'nk Y]'\Rightarrow [YbX]Yfb']YfYb']YfYb'\Rightarrow [YbX`]W\Y']bg[YgUa h'%) + ']bh]a Y'6]`XYf'i bX

J]XYcg'Ub'XYb'5b[Y_`U[hYbž'k]Y'H!Cb`]bY'VYf]W\hYh'''5`g'X]Y

%*!\A\f][Y'XYb'?cbhU_h']a 'GYdhYa VYf'\Rightarrow Rightarrow [YVYf'i bX]

BUW\VUfb"

 $8 Ug^{*}; Yf]WAh^{*}j Yfi fhY]^hY^{*}b^{*}k Y[Yb^{*}XYf^{*}6YgWAUZZi b[$

$8]Y ; YZU \ fYb XYg = bhYfbYhg$

 $8] YgYf: U```k] fZhY] b `GW\`U[`]W\ h`Ui Z'Y] b `j] Y``[fÒ> YfYg`DfcV`Ya . \\ 8] Y `gYI i Y``Y`6Y`Agh] [i b ['j cb '$ [YbX`]W\ Yb ']a '$ hYfbYh'' 9] b Y U_hi Y``Y`Ghi X] Y`nY] [hž`XUgg'', i 'XYf'$ [YbX`]W\ Yb 'VYfY] hg`Y] ba U` a]h`gYI i Y``Yf`6Y`Agh] [i b ['cb`]bY'_cbZfcbh] Yfh`k i fXYb'''6YgcbXYfg U`Ufa] YfYbX'] ghž`XUgg`%\ i 'Ub [YVYbž`cZh`cXYf`gY\f`cZh`VYhfcZZYb ni 'gY]b'''8] Y`6YZfU[i b [ž`Xi fW\ [YZØ\fh'j ca '$gh] hi h`ZØf $ [YbX_i `hi fZcfgW\ i b [']a '5i ZhfU['XYg'^2 $ H`i bX' $ D5 ž`VYn] Y\h g] W\ 'Ui Z'($) '$ [YbX`] W\ Y`nk] gW\ Yb '%\ i bX'\+ '$U\fYb'i bX'\k i fXY]a 'C_hcVYf`&\$&('Xi fW\ [YZØ\fh'' A Y\f`\$Zcfa Uh]cbYb'Z] bXYb'g] W\ Ui Z'GUZYf] bhYfbYh''Uh'i bX'cb`] bYg] W\ Yf\Y]h'' [j "Uh''$

 $8]Y', VYf[f]ZZY'Z]bXYb'j cf'U``Ya']b'gcn]U`Yb'BYhnk Yf_Yb'i bX \\ A YggYb[Yfb'ghUhh'''6Y]'%%!'V]g'%(!<math>\dot{A}$ \f][Yb'g]bX'&, i 'VYhfcZZYbž i bX'X]Y'NU\``ghY][h'Ui Z') %i 'VY]'XYb'%)!'V]g'%+! \dot{A} \f][Yb'''8]Y Ghi X]Y'nY][h'Ui W\'ž'XUgg'(&i 'XYf'6YZfU[hYb'Yf`YVh'\UVYbž'XUgg BUW_hZchcg'c\bY'Ni gh]a a i b['k Y]hYf[Y`Y]hYh'k i fXYb'''I bX'Ui W\ k Ybb'%(i 'XYf' \dot{A} [YbX`]W\Yb'gY`Vgh'BUW_hV]`XYf'j YfgW\]W_hYbž [`Ui VYb') \$i \z'XUgg'X]Y'CdZYf'gY`Vgh'gW\i `X'gY]Ybz'k Ybb'X]YgY 6]`XYf'k Y]hYf'j YfVfY]hYh'k YfXYb''

6YXUfZUb i a ZUggYbXYf 5i Z_`Afi b[

 $8]Y `8 UhYb `g]b X `U`Ufa]YfYb X `i b X `nY][Yb \check{z} X Ugg `Yg `Xf]b[Yb XYb 6Y X UfZ `Ub `5 i Z_`Àfi b[ga U >> b U \ a Yb `[]Vhž]bg V Yg cb X Y f Y `ZØf k Y]V`]W X Y $\frac{1}{3} [Yb X `]W X Y "`GW i `Yb `gY \ Yb `g]W `]b `X Y f `J Y f Ub hk c fhi b[ž a Y \ f *\b Z c fa Uh]cb Yb `i b X `Df Àj Yb h]cb gk c f_g \ c dg `V Y f Y]hni gh Y ``Yb " GUZYf]b h Y fb Yh "Uh "V]Yh Yh \]Y fni 'A Uh Y f]U`]Yb `i b X `K c f_g \ c dg `Ub Ž k À \ f Yb X `X]Y 'C f[Ub]g Uh]cb 'F Uh `Ui Z `8 f U \ h '_cgh Y b `cg Y `C b`]b Y!$

±g[YgUa hik ØbgWXYbig]WXi*% XYfVYZfU[hYbiA ÀXWXYbiibXi(*iXYfi≯b[Ybia Y\fi±bZcfa Uh]cbYbini a `GWXi hnij cfi¸ VYf[f]ZZYb" 8]YgYi9f[YVb]ggYij YfXYi hi]WXYbžiXUggiUi WXi9`hYfbiibX 6Y[`Y]hdYfgcbYbigYbg]V]`]g]Yfhik YfXYbia ØggYbžiia `XUg 6Yk i gghgY]biZØfiX]YiF]g]_YbžiX]Yi]a `±bhYfbYh``Ui Yfbžini `gWXÀfZYb"

8]Y; YgWXY\b]ggYia XYb**\$!^À\f][Yb*A Ubb*Ui g'< Ua Vi f[*g]bXb]WXh*bi f*Y]b*9]bnY*ZU``"*G]Y*gd]Y[Y*b*Y]b*[fÒ»YfYg
[YgY``gWXUZh`]WXYg*DfcV`Ya k]XYf"*9g*]gh*k]WXh][ž*XUgg*X]Y
6YhfcZZYbYb*g]WX*b]WXh*gWXÀa Ybž*gcbXYfb*]\fY*9fZU\fi b[YbhY]`Ybž*i a *UbXYfY*ni k* UfbYb*i bX*ni *gWXØhnYb***@YhnhYbX`]WX*`]Y[hYg*Ub*i bg*U``Ybž*Y]bYb*g]WXYfYb*FUi a *ZØf*i bgYfY*¾[YbX*ni gWXUZZYb*i bX*XYb*bOh][Yb*GWXi hn*]b*XYf*X][]hU`Yb*K*Y`h*ni [YkÀ\f`Y]ghYb*

8YhU]`g	
Cfh	9]a gVØhhY`ž'8Yi hgWX`UbX
EiY``Yb	• \Ua Vi f["h!cb`]bY"XY
	k k k "gUZYf]bhYfbYh"Uh
	k k k "cb`]bYg]WXYf\Y]h"[j "Uh

6Ygi WXYb G]Y i bg Ui Z. bU[!\Ua Vi f["XY