A Uhh\Yk 'H_UW\i _ '@YUXg': `cf]XU $DUbh\Yfg'Hck\UfX'GhUb`Ym'7i\ d'; `cfm'$

8]gWcj Yf`\ck 'A Uhh\Yk 'H_UW\i _ ``YUXg'h\Y': `cf]XU'DUbh\Yfg]b'h\Y]f'ei Ygh'Zcf'h\Y'GhUb`Ym'7i dž'fYj]j]b['hYUa 'df]XY'UbX ZUb'Ybh\i g]Uga "



 $: `cf] X U \check{z} I G 5 !! 5 g `h Y :: `cf] X U `D U b h Y f g `V f U W `Z cf `U b c h Y f h Y f] ``] b [`G h U b `Y m 7 i d ::] b U ``f Y a U h W `U [U] b g h h Y '9 X a c b h c b `C] `Y f g \check{z} Z U b g `U f Y `Z] ``Y X `k] h \ `\cd Y `U b X `Y I W] h Y a Y b h " H \] g `] g `b c h `f g h `\c W_Y m \] h g `U `h Y g h U a Y b h `h c `d Y f g Y j Y f U b W Y z `U a V] h] c b z `U b X `U `W c a a] h a Y b h h c `g i W W g g z `Y g d Y W] U ``m ``Y X `V m h \ Y `] b X c a] h U V `Y `A U h h \ Y k `H_U W i _" <] g `U f f] j U ``] b : `cf] X U a U f_Y X `h \ Y `X U k b `c Z `U `b Y k `Y f U `Z c f `h \ Y D U b h \ Y f g z `\cc_] b [`h \ Y `] b h Y f Y g h `c Z `Z U b g `U b X `] [b] h] b [`U `d U g g] c b `Z c f \ c W_Y m] b `G c i h \ : `cf] X U `h \ U h ` \ U X `V Y Y b ``m] b [`X c f a U b h `Z c f `m Y U f g " 5 W C f X] b [`h c `A c h c f W W Y `G d c f h g z `H_U W i _ g `f Y `Y b h `Y g g `d `U m] b [g h m Y z ``Y U X Y f g \] d z `U b X `U V] `] h m `h c `g \] b Y `] b `W f] h] W U ``a ca Y b h g `\ U j Y d i g \ Y X `h \ Y `D U b h \ Y f g `] b h c `h \ Y `B < @ g d c h `] [\ h"$

 $HY'DUbhYfg'YjY'gCkb']bWfYX]VY'XYhYfa]bUh]cb'hYfci[\cih$

 $h\ Y]f'd\ Umc\ ZZ'cifbYm\ Z'YX'Vm'H_UW\ i_g']a\ dfYgg]j\ Y'ghUhg'UbX i bk Uj Yf]b['gd]f]h''' < Y'bch'cb`m``YUXg'h\ Y'hYUa ']b'dc]bhg'Vi h'U`gc ZcghYfg'U'W'`hi fY'cZ'fYg]`]YbW''h\ Uh'dYfa YUhYg'h\ Y'gei UX'''K]h\ Yj Yfm'Z]\ U_cZ'h\ Y'di \ W_ž'\]g'Wcbhf]\ Vi h]cbg'\ Uj Y'bch'cb`m'fYk f]hhYbh\ Y'bUffUh]j Y'cZ'h\ Y'ZfUbW\]gY'Vi h'\ Uj Y'U`gc'gdUf_YX'U fYgi f[YbW'cZ']bhYfYgh'UbX'Ybh\ i g]Uga 'Ua cb['h\ Y'ZUbVUgY'''K]``h\ Y'DUbh\ Yfg']bXYYX'WUdhi fY'h\ Y'Y`i g]j Y'GhUb`Ym'7i d'h\]g'h]a YUfci bX3'\ h'k ci `X'gc`]X]\ Zm'H_U\ Xi _ g'ghUhi g'Ug'cbY'cZ'h\ Y'[fYUhYgh d`UmYfg']b'h\ Y'ZfUbW\]gY g'\]ghcfm'$

5 @Y [UWm]b h\ Y A U_]b[

 $\label{thm:continuous} Hc "i b XYfghUb X" if gh'\ck "ZUf'h\Y"DUbh\Yfg"\Uj Y'Wca Yž'Wcbg]XYf h\Y"VUW_Xfcd "cZ'h\Y]f"`Ugh'W\Ua d]cbg\]d "fi b"" $\disp \disp \beta \&(\disp \beta \beta \disp \beta \b$

a dcfhUbh`mž'h\Y`DUbh\Yfg 'hfUbgZcfa Uh]cb`k Ug`[fUXi U`ž']bj c`j]b[g][b]Z]WUbh'cf[Ub]nUh]cbU``W\Ub[Yg'UbX'U'XYhYfa]bYX'ZcWig'cb]a dfcj Ya Ybh"'HYUa'79C'A Uhh\Yk'7U`Xk Y``'dc]bhYX'ci h`\ckUhhYbXUbWi']ggi Yg'\UX'd`U[i YX'h\Y'hYUa'ZcfmYUfgž'`YUX]b['hc]bbcj Uh]j Y'ghfUhY[]Yg'hc'Yb[U[Y'ZUbg"'H\Y'g\]Zh'Uk Um'Zfca[]a a]W_g``]_Y'cZZYf]b['ZfYY'h]W_Yhg'hc'U'ghfcb[Yf'Ya d\Ug]g'cb'cb!]WY'dYfZcfa UbWY'fYZYWhg'U'Wca a]ha Ybh'hc'`cb[!hYfa'gi WWYgg"Ck bYf'J]bbm'J]c`U g'ghfUhY[]Wj]g]cb'\Ug'fcchYX'h\Y'ZfUbW\]gYZ]fa`m']b'Gci h\': `cf]XUž'X]gdY``]b['fY`cWUh]cb'fi a cfg'UbXfY]bZcfW]b['Wca a i b]hm'h]Yg"

<YUX'WcUW\'DUi ``A Ui f]W\'z`k \c'hcc_'h\Y'fY]bg']b'&\$&&z`\Ug'VYYb
]bghfi a YbhU``]b'Yb\UbW]b['h\Y'hYUa g'ghfi Whi fY'cb'Vch\'cZZYbgY
UbX'XYZYbgY"'K]h\'H_UW\i_'Uh'h\Y'\Y`a z'h\Y'DUbh\Yfg'\Uj Y
VU`UbW\X'h\Y]f'\]ghcf]WghfYb[h\g'k]h\'bYk Zci bX'XYdh\'UbX</pre>

5bh]W]dUh]b['h\Y'FYa UhW

A Uhh\Yk 'H_UW\i _'Wci `Xb h'VY'a cfY'YI W]hYX'Zcf'h\Y'i dWca]b[
:]bU`gžYI dfYgg]b['WcbZ]XYbWY'h\Uh'h\]g'fYi b]cb'k]h\'h\Y'C]`Yfg
Wci `X'VY'Yj Yb'a cfY']bhYbgY'h\Ub'`Ugh'mYUf g'YbWci bhYf"' Mci
[i mg'UfY'hcc'[ccXž '\Y'dfU]gYXž'XfUk]b['Zfca 'h\Y'a i hi U`'fYgdYWh
h\Uh g'XYj Y`cdYX'VYhk YYb'h\Y'hYUa g"'5g'h\Ym'dfYdUfY'Zcf'; Ua Y
%'Uh'Fc[Yfg'D`UWY']b'9Xa cbhcbž'h\Y'ghU_Yg'UfY'i bXYb]UV`m'\][\"
K\]`Y'h\Ym'g\UfY'ZUa]`]Uf]hm'Zfca '`Ugh'gYUgcbž'Vch\'g]XYg'\Uj Y
]bZ gYX'bYk 'hU`Ybh']bhc'h\Y]f'fcghYfgž'Ybgi f]b['h\Uh'h\]g'VUhh`Y'k]``
VY'cbY'Zcf'h\Y'U[Yg"

 $\label{thm:converse} \begin{tabular}{ll} Sg'h Y' Ubh] W] d Uh] cb' Vi \end{tabular} Xg' Ufci b X' Ubch Yf' GhUb Ym'7 i d':]b U'ž'h Y \cdYg'c Z' Wci b h Ygg' Z Ubg' UfY'] b h Yfhk]b Y X' k]h \end{tabular} h \end{tabular} Y' ci fb Ym'c Z'h Y DUbh Yfg'' A Uhh Yk 'H_UW i_g' Wcbhf] Vi h] cbg' UfY' Uh'h \end{tabular} Y' ZcfY Z fcbhž Ub X' \end{tabular} g' YUXYfg \end{tabular} a g' Wcbhf] Vi h] cbg' UfY' Uh'h \end{tabular} Y' V' Yb X c Z' d Ugh'ghfi [['Ygž' W' ffY b h 'gi WW ggY gž' Ub X' Zi hi fY' Ugd] f Uh] cbg WfY Uh Yg' Ub Yl \end{tabular} UfUh] b ['Uha cgd \end{tabular} YfY' Zcf' h \end{tabular} Y' DUbh \end{tabular} Yfg' Ub X' h \end{tabular} f g' ub X' h \end{tabular} f g' ub X' h \end{tabular} f g' ub X' h \end{tabular} Y' f g' ub X' h \end{tabular} Y' f g' ub X' h \end{tabular} f g' ub X' h \end{tabular} Y' f g' ub X' h \end$

 $5g'h Y'gU[U'Wcbh]bi Ygž'DUbh Yfg'ZUbg'WUb'VY'Uggi fYX'cZ'cbYh]b[.'k]h 'H_UW i_'`YUX]b['h Y'W Uf[Yž'h Y'di fgi]h'cZ'h Y GhUb Ym'7 i d' \ Ug'bYj Yf'ZY h'a cfY'hUb[]V Y''$

8YhU]`g		
Cfh	: `cf]XUž'I G5	

8 YhU]`g	
EiY``Yb	a chcfWhWYgdcfhg"bYh
	• k k k "b \ `"Wca
	• k k k "Ygdb"Wca

6Ygi WXYb G]Y i bg Ui Z. a Y]b!k]Yb bYh