$Jcig]U'7cibhm/[$'-/g'G\cW]b['GYIGh]b[.'%('5ffYghg']b'H\fYY'8Umg'$

5 'fYW bh'gh]b[']b'Jc'i g]U'7ci bhm'`YX'hc'%('UffYghg'Zcf'cb`]bY YI d`c]hUh]cbž']bj c'j]b['`Uk 'YbZcfWa Ybh'UWfcgg'a i 'h]d`Y U[YbW]Yg"



CfUb[Y'7]hmž'IG5'!=b'U'ghf]_]b['YbZcfWYaYbh'YZZcfhž'U'fYWYbhgh]b['cdYfUh]cb']b'Jc'ig]U'7cibhm'\Ug'`YX'hc'h\Y'UffYgh'cZ'%('aYb]bjc'jYX']b'UhhYadh]b['hc'Yb[U[Y'a]bcfg']b'gYIiU`'UWh]j]h]Yg"H\]g'cdYfUh]cbž'XiVVYX'CdYfUh]cb'HfUjY`'hc';UjY`ž'ibZc`XYXcjYf'h\fYY'XUmg'Zfca';bY')'hc';bY'+ž'&\$&)ž'UbX'g\ckWUgYX'h\YfY`Ybh`Ygg'difgi]h'cZ'^igh]WY'Vm``cWU```Uk'YbZcfWYaYbh'U[YbW]Yg"

I bXYfWcj Yf'XYhYWh]j Yg'dcg]b['Ug'WX]`XfYb'U[YX'%' 'hc'%)
gi WWYggZi ``m'WUdhi fYX'%('gi gdYWhgž'gca Y'\U]`]b['Zfca 'Jc`i g]U
7 ci bhm'k \]`Y'ch\Yfg'^ci fbYmYX'Zfca 'ci h'cZ'ghUhY"'5a cb['h\cgY
UddfY\YbXYXž'A cg\Y'&gi Y'8Y`[UXc'¾UfYnž'&) ž'Zfca 'C WU`Už
ghUbXg'ci h'Zcf'U'dUfh]W'`Uf`m'gYj YfY']bW]XYbh'k \YfY'\Y'U``Y[YX`m
Xfcj Y'\]g'j Y\]WY']bhc'U'g\Yf]ZZ g'XYdi hmž'fYgi `h]b[']b'U'ZfUWhi fYX

Y['Zcf'h\Y'cZZ]WYf": UW]b['a i `h]d`Y'gYf]ci g'W\Uf[Ygž'8Y`[UXc \$\forall UfYn']g'W' ffYbh`m'\Y`X'k]h\ci h'VU]`'Uh'h\Y'Jc`i g]U'7ci bhm'6fUbW\\J]`ž'k]h\'W\Uf[Yg'h\Uh']bWi XY'hfUj Y`]b['hc'a YYh'U'a]bcf'Zcf'gYlUbX'U[[fUj UhYX'VUhhYfm''A YUbk\]`Yž'&g\i U'@YY'K U`_Yfž'() ž'Zfca@Yl]b[hcbž'Bcfh\'7Ufc`]bUž'ZUWYg'W\Uf[Yg'h\Uh']bWi XY'i g]b['UWca di hYf'hc'i fY'U'W\]`X'UbX']g'\Y`X'cb'` &&ž) \$\$'VU]`"

$K \ C \ K \ YfY \ h \ Y \ C \ h \ Yfg3$

H\Y`fYa U]b]b[`gi gdYWhgž'U```W\Uf[YX`k]h\`g]a]`Uf`cZZYbgYg`cZ hfUj Y`]b[`hc`a YYh`U`a]bcf`Zcf`gYl `UbX`i g]b[`U`Wca di hYf`hc`gc`]W]h U`W\]`Xž']bWi XY.

- 🖈 `]c '7 YgUf F YU` '7 \ Uj Uff]Už'' ' ž Gci h\ '8 UmhcbU
- A Uh\]Yi 'A Yfj Y]`'?ci Uhcbci ž'&- ž'Cf`UbXc
- B]Y[Y`; Ycf[Y`&\bqcbž'&, ž'8UmhcbU'6YUW
- Gci fUV 7\]`U_Ua Uff]ž'&* ž'8 UmhcbU'6YUW
- FY]bU`Xc'FUm'AYX]bU'\f"z'' %z'Gci h\ '8UmhcbU
- 7 Uf`cg; Ycf[Y; i YVUfUž') % 28 Y@UbX
- ?YbbYh\'@Ycb'6U`Xk]b'≸"ž' ž'8UmhcbU'6YUW\
- H\ca Ugʻ9Xk UfXʻA W?YYžʻ' žʻDcfhʻCfUb[Y
- DUhf]W_'*Ja Yg'7cbWfYYž'(\$ž'?]gg]a a YY
- $\bullet : fUbW]gWc`*Jj]Yf`*{} fUXcž`' ' ž`CfUb[Y`7]hm$
- $\bullet \ \ \, FcVYfh`GWchh`G\backslash\,]d`Ym`\$''\check{z}`\&^*\check{z}`J\,Yfc``6YUW\&$
- \times gYd 5 Ub 1 K 1]Ua gcb 2)) 2 Dcfh 1 CfUb[Y

H\]g`cdYfUh]cb`k Ug`dUfh`cZ`U`VfcUXYf`]b]h]Uh]j Y`]bj c`j]b[
bi a Yfci g``Uk 'YbZcfWa Ybh`VcX]Ygž`]bWi X]b['h\Y'Bcfh\': `cf]XU

\DhYfbYh`7f]a Yg`5[U]bgh`7\]`XfYb`HUg_': cfW 'UbX'h\Y': `cf]XU

8YdUfha Ybh`cZ'@Uk '9bZcfWa Ybh" H\Y]f`Wc``UVcfUh]j Y`YZZcfhg
\][\`][\h'h\Y'dfYgg]b['bYYX'hc'dfchYWh'j i `bYfUV`Y'dcdi `Uh]cbg

Zfca 'gYl i U`'dfYXUhcfg"

K]XYf'7cbhYlh.'CdYfUh]cb'7fYYd'Gk YYd

 $\Rightarrow gh'XUmg'VYZcfYž'Ubch\Yf'cdYfUh]cbž' CdYfUh]cb'7fYYd'Gk YYdž WcbWi XYX'k]h\'U'XcnYb'UffYghg'''H\Y'Jc`i g]U'G\Yf]ZZg'CZZ]WW]b]h]UhYX'h\]g'WfUW_Xck b']b'5df]`ž'gdYW]Z]WU``m'hUf[Yh]b['gYIi U`$

 $\label{thm:continuous} $$ dfYXUhcfg"5'fUb[Y'cZ'X]ghi fV]b['cZZYbgYg'Ya Yf[YX'Zfca'h\]g $$ cdYfUh]cbž']bWi X]b[']bX]j]Xi U`g'WUi [\hii g]b['i bfY[]ghYfYX'cb`]bY $$ UWWci bhg'UbX'dcggYgg]b['W\]`X'dcfbc[fUd\m''CbY'dUfh]Wi`Uf`m $$ hfci V`]b['WUgY']bj c`j YX'U'gi gdYWh'Z]`a]b['gYl i U`'UWhg'UbX gYbX]b['h\Ya'hc'\]g'ck b'XUi [\hYf"$

- xg\iU'xVYž'&(' GYI'CZZYbXYf
- $DUhf]W_{\cdot}: i \cdot hc b \check{z}') + GYI \cdot C ZZY b XY f$
- H\ca Ug MuhYgž**, GYI CZZYbXYf
- 9fj]b~xbYgž() ~ GYIiU~DfYXUhcf
- 6f]Ub '9W_Y`VYW_Yfž'(' ' 'GYI 'C ZZYbXYf
- 5bXfYg'9gWcVUfž'&, ' '7\Uf[YX'k]h\'hfUjY`]b['hc'a YYh'U a]bcf'Zcf'gYliU`'UWh]j]hm
- 8 UffYb '9Ughž'' %' 'G]a]`Uf'W\Uf[Yg'Ug'9gWcVUf
- FcXc`Zc'CX]c'8]Unž'&' 'Ai`h]d`Y'gYf]cig'W\Uf[Yg'k]h\'Ub]aa][fUh]cb'\c`X

H\Y'Jc`ig]U'G\Yf]ZZg'CZZ]WW'fY`YUgYX'VcXm!kcfb'WUaYfU'ZcchU[Yh\Uh'WUdhifYX'jUf]cig'acaYbhg'cZh\Y'cdYfUh]cbgž'g\YXX]b[''][\hcb'h\Y'W\U``Yb[]b['kcf_'ibXYfhU_Yb'hc'YbgifY'Wcaaib]hmgUZYhm"

5g'h\ YgY'cdYfUh]cbg'i bZc`Xž']h g'WYUf'h\ Uh'h\ Y'Jc`i g]U'Wca a i b]hm]g'fU``m]b['U[U]bgh'gYI i U``dfYXUh]cb'k]h\ 'Vch\ 'fYgc`j Y'UbX'UWh]cb" H\ YfY g'gca Yh\]b['hc'VY'gU]X'Zcf'h\ Y'XYX]WUh]cb'cZ'ci f'`Uk YbZcfWYa Ybh'U[YbW]Yg'UbX'Wca a i b]hm'a Ya VYfg'k cf_]b[hc[Yh\ Yf'hc'g\]Y`X'ci f'mci h\ 'Zfca '\ Ufa "'H\ Y'j][]`UbW'a i gh Wcbh]bi Yž'UbX'h\ Y'UWh]cbg'Zfca 'Vch\ 'cdYfUh]cbg'gYfj Y'Ug'U'ghUf_fya]bXYf'cZ'h\ Y'bYYX'Zcf'cb[c]b['Uk UfYbYgg'UbX'WccdYfUh]cb']b Wca VUh]b['gYI i U`'Wf]a Yg'U[U]bgh'a]bcfg"

 $: \texttt{cf'Z} \text{ } \texttt{fh} \texttt{Yf'} \texttt{XYhU} \texttt{]} \texttt{`g} \texttt{\'s'mc} \textbf{``WUb'} \texttt{fYUX'} \texttt{a} \textbf{ cfY'} \texttt{cb'} \textbf{BYk} \textbf{ g!} \times \textbf{i} \textbf{ fbU} \textbf{``Cb'} \textbf{]bY}$

8 Y hU]`g	
Cfh	CfUb[Y:7]hmži G5
Ei Y``Yb	k k k "bYk g! 'ci fbU`cb`]bY"Wca
	• k k k "W]W_cf`UbXc"Wca

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