## 

H\Y`@Ug`JY[Ug`FU]XYfgž``YX`Vm`bYk`WcUW\`DYhY`7Uffc``žghfUhY[]nY`Zcf`&\$&)`k]h\`\_Ym`fcghYf`XYW]g]cbg`Uh`hfU]b]b[WJad"



@Ug'JY[UgžI G5 ! 5g'h\Y @Ug'JY[Ug'FU]XYfg'[YUf'i d'Zcf'h\Y &\$&) 'gYUgcbžh\Ym'UfY'a U\_]b['\YUX`]bYg'k]h\'gca Y']a dUWhZi` cZZgYUgcb'a cj Yg'U]a YX'Uh'Vi]`X]b['U'ghfcb[Yfž'a cfY'Wca dYh]h]j YhYUa "'H\]g'mYUf'a Uf\_g'U'g][b]Z]WUbh'hfUbg]h]cbž'\][\`][\hYX'Vm'h\Y\]f]b['cZ'j YhYfUb'\YUX'WcUW\'DYhY'7Uffc``ž'k\c']g'fYbck bYX'Zcf\]g'`YUXYfg\]d'UbX'gi WWYggZi`'hfUW\_'fYWcfX']b'h\Y'B: @''7Uffc`` gUff]j U`']g'k]XY'm'fY[UfXYX'Ug'U'd]j chU`a ca Ybhž'Ug'ghUV]`]hm'\Ug

 $5`cb[g]XY'7Uffc``ž'h\Y'FU]XYfg'\UjY'Uddc]bhYX'&\b'GdmhY_'Ugh\Y]f'bYk'[YbYfU``a UbU[Yf'''GdmhY_']g'kY``!_bckb'Zcf'\]g'_bUW_$ 

Zcfigdchh]b[ 'hU`Ybhž'UbX'ZUbg'UfY'YU[ Yf'hc'gYY'\ck '\]g'ghfUhY[]Yg i bZc`X'cb'h\Y'Z]Y`X"'H\Y'hYUa g'Ubbci bWa Ybh'Wca Yg'Ug dfYdUfUh]cbg'Zcf'hfU]b]b[ 'WUa d'VY[]bž'gYhh]b[ 'h\Y'ghU[Y'Zcf'Z]bU`fcghYf'XYW]g]cbg'U\YUX'cZ'h\Y'bYk 'gYUgcb"'+b'ZUWhž'h\YfY g'U'`ch'cZ Vi nn]b[ 'Ufci bX'k \]W\'d`UmYfg'k]``gYW'fY'h\Y]f'gdchgž'YgdYW]U``m Uh'h\Y'h][\h'YbX'dcg]h]cb"

## Dcg]h]cb 6Uhh`Yg Ub X DfYX]Wh]cbg

<cbXc '7 UfdYbhYf'fYWYbh`m'g\UfYX']bg][\hg'cb'h\Y' @Ug'JY[Ug
FU]XYfg'\pg]XYf'DcXWUghž 'XYWUf]b['h][\h'YbX'6fcW\_'6ck Yfg'U
`cW\_ 'Zcf'h\Y'fcghYf"'7 UfdYbhYf'Yj Yb'`]\_Ybg'6ck Yfg'hc'B: @
`Y[YbX'8 Ub'A Uf]bcž'Ya d\Ug]n]b['\]g'dchYbh]U``hc'g\]bY']b'h\Y'Dfc
6ck `"'K]h\'6ck Yfg'g\ck]b['dfca]gYž'A]W\UY``A UmYf'U`gc'UddYUfg
fYUXm'hc'gc`]X]Zm'\]g'd`UWY'cb'h\Y'hYUaž'\Uj]b['YI WY``YX']b
dfUWh]WY'gYgg]cbg"</pre>

 $\begin{tabular}{ll} $M'h \v h' \begin{tabular}{ll} $M'h \v h' \be$ 

## GhfUhY[]WA cj Yg'UbX': ]bUbW]U`'< YU`h\</pre>

 $\label{thm:continuous} H\Y``UbXgWUdY`cZ'h\Y`B:@]g`cZhYb`g\UdYX`Vm`ghfUhY[]WacjYgUbX`Z]bUbW]U``Wcbg]XYfUh]cbg"`H\Y`cZZgYUgcb`]g`aUf_YX`Vm`WfiW]U`XYW]g]cbg`fY[UfX]b[`d`UmYf`WcbhfUWhgž`Wihgž`UbX`fY!g][bgž`U```cZk\]WX`WcaY`]bhc`d`Um`Ug`hYUag`bUj][UhY`h\Y`gU`Ufm`WUd"`5g\][\`][\hYX`Vm`Dfc`:cchVU```BYhkcf_ž`h\Y`B:@gU`Ufm`WUd`UWhg`Ug`Uh][\h``YUg\hYUag`aigh`U`kUmg`ghUm`VYbYUh\`]hž`UbX`YjYfmXYW]g]cb`kY][\g`\YUj]`m`U[U]bgh`h\Uh`Z]bUbW]U``WY]`]b["$ 

8 i f]b[ 'h\ Y 'c ZZgY Ugc b ž'c b `m'h\ Y 'hc d ') %'d `UmY f'gU`Uf]Y g'Wc i bh U[ U]bgh'h\ Y 'WUd ž'U'Zc W' g'h\ Uh'U``c k g'hY Ua g'`]\_Y 'h\ Y 'F U]XY fg'hc ghf UhY [ ]nY 'Y ZZY Wh]j Y `m'V Y Zc fY 'h\ Y 'Z]b U`'fc ghY f']g'gY h"

I bXYfghUbX]b[ 'h\Y'bi UbWYg'cZ'i bfYghf]WhYX'UbX'fYghf]WhYX'ZfYYU[Ybh'XYg][ bUh]cbg'UXXg'Ubch\Yf'`UmYf'hc'h\]g'Wca d`Yl'di nn`YžYa d\Ug]n]b[ 'h\Y']a dcfhUbWY'cZ'hUWh]WU`'d`UmYf'a UbU[Ya Ybh'UbXZcfYg][\h"

5```YmYg`UfY`cb`h\Y`FU]XYfg`Ug`h\Ym`Ya VfUWY`h\]g`bYk`W\UdhYf i bXYf`DYhY`7Uffc```g`[i]XUbWY`UbX`zc\b`GdmhY\_g`\_YYb`YmY`Zcf hU`Ybh"`K]h\`h\Y`cZZgYUgcb`a cj Yg`dUj]b[`h\Y`k Um`Zcf`U'j]VfUbh UbX`Wca dYh]h]jY`fcghYfž`ZUbg`k]```VY`k UhW\]b[`'WcgY`m`hc`gYY`\ck h\Y`d]YWYg`Wca Y`hc[Yh\Yf"`7Ub`h\Y`FU]XYfg`WUd]hU`]nY`cb`h\Y]f ]a dfcj Ya Ybhg`UbX`a U\_Y`U`a Uf\_`]b`h\Y`i dWca]b[`gYUgcb3

cfih\cgY'\_YYb'hc'XY'j Y'XYYdYf']bhc'h\YgY'XYj Y`cda Ybhgž'

G="Wca 'cZZYfg'U'WcgYf'`cc\_'Uh'h\Y'fYWYbh'FU]XYfg'i dXUhYgž'k\]'Y'

FU]XYfg"Wca 'X]gW ggYg'7Uffc`` g'j ]g]cb'Zcf'h\Y'hYUa "

5XX]h]cbU``mž'Dfc': cchVU```BYhk cf\_'dfcj ]XYg']bg][\hg']bhc'h\Y

cj YfUfWX]b['ghfUhY[m'VY\]bX'B:@fcghYf'a UbU[Ya Ybhž'YggYbh]U`
\_bck `YX[Y'Zcf'Ubm'hfi Y'ZUb'Zc``ck]b['h\Y'`YU[i Y g']bhf]WUhY

XmbUa ]Wg"

8 YhU]`g	
Cfh	@Ug <sup>-</sup> J Y[ Ugž <sup>-</sup> l G5
EiY``Yb	• k k k "g]"Wca
	<ul><li>k k k "fU]XYfg"Wca</li></ul>
	<ul><li>k k k "dfcZcchVU``bYhk cf_"Wca</li></ul>

6 Y gi W Y b 'G | Y 'i b g 'U i Z 'a Y | b ! k | Y b "b Y h