7UfX]bU`g`: UWY`7fi W]U``\\ bY.`K]```HfUXYg G\UdY`H\Y]f`GYUgcb3



Gh" @ci]gžI G5 ! H\Y Gh" @ci]g 7 UfX]b U`g Z]b X h\Ya gY`j Yg Uh`U Wfi W]U`' b Whi fY Ug is bY i b Zc`Xgžgdcfh]b ['U'g\U_m'%! ('fY WcfX Ub X fYY`]b ['Zfca 'hk c' WcbgY W' h]j Y 'gYf]Yg ``cggYg" K]h\ 'U'gW\YXi 'Y dUW_YX k]h\ 'W\U``Yb []b ['cddcbYbhgž']b Wi X]b ['h\Y @cg'5b [Y`Yg 8 c X [Yfg Ub X 'Hcfcb hc'6'i Y 's Jmgž'h\Y 'b Y I h 'ZYk 'k YY_g 'Wci 'X X YhYfa]b Y 'h\Y 'hY Ua g'ghf UhY [m'Ug'h\Y 'hf UXY 'XY UX`]b Y ``cca g'cb i `m' %" '5g'h\Y 'df Yggi fY 'a ci bhgž'h\Y '7 UfX]b U`g'a i gh XY W]XY k \Yh\Yf'h\Ym'k Ubh'hc 'Vi m'cf'gY``'cb'h\Y'a Uf_Yhž'U'XY W]g]cb]b Zi Yb WY X 'V m'h\Y]f'dYf Zcfa Ub WY'h\]g'a cbh\" = Z'h\]b [g'Xcb h]a dfcj Yž'd`UmYfg'cb'YI d]f]b ['Wcbhf Uwhg'`]_Y F mUb' < Y`g`Ym'Ub X 'D\]`A Uhcb' Wci `X'gccb'VY'cb'h\Y'a cj Y"

 $HY'gWXYXiY'XcYgbh'[Yh'Ubm'YUg]Yf''5ZhYf'ZUW]b['h\Y'8cX[Yfg]$

UbX'6`i Y'*Jmgž'h\Y'7UfX]bU`g'\]h'h\Y'fcUX'Zcf'U'gYf]Yg'U[U]bgh'h\Y A]`k Ui _YY'6fYk Yfg U'hYUa 'h\Uh']g'W'ffYbh`m'^cW_Ym]b['Zcf dcg]h]cb']b'h\Y'BUh]cbU``@YU[i Y'7YbhfU``U`cb['k]h\'h\Y'7\]WU[c7i Vg"'<YfY]b'`]Yg'h\Y'W\U``Yb[Y.']Z'h\Y'7UfX]bU`g'Xcb h'ghUfh hi fb]b['h\]b[g'Ufci bXž'h\Y]f'd`UmcZZ'XfYUa g'Wci `X'g`]d'Uk Um' H\YfY g'gca Yh\]b['hc'VY'gU]X'Zcf'h\Y']a dcfhUbWY'cZ'YUW\'[Ua Yž YgdYW]U``m'k]h\'cb`m'cbY'gW\YXi `YX'cZZ'XUm'i bh]`'\$\in'' "

H\Y@UbXgWUdY5\YUX

8 Ygd]hY'h\Y]f'fci [\'ghUfhž'h\Y'7UfX]bU`g'\Uj Y'g\ck b'g][bg'cZ]a dfcj Ya Ybh"'CbWY'ghfi [[`]b['Uh'%(!%- ž'h\Ym'\Uj Y'hi fbYX'h\]b[g Ufci bX'k]h\'U'fYa Uf_UV`Y'fi bž'k]bb]b['&\$'cZ'h\Y]f'`Ugh'&[Ua Yg"'FYa Uf_UV`mž'h\Y'7UfX]bU`g 'cZZYbgY'bck 'fUb_g'Zci fh\']b A U'cf'@YU[i Y'6UgYVU``]b'VUhh]b['Uj YfU[Yž'k\]`Y'h\Y'd]hW\]b[ghUZZ'\Ug'VYWca Y']bWfYUg]b[`m'fY`]UV`Yž'ZYUhi f]b['Zci f'ghUfhYfg k]h\'Ub'9F5'VY`ck'("\$\$"'H\Y'Vi ``dYb']g'ghfcb['UbX'WcbZ]XYbhž``YX Vm'h\Y'hU`YbhYX'FmUb'<Y`g`Ymž'k\c'\Ug'VYYb'bch\]b['g\cfh'cZ ghY``Uf'h\]g'gYUgcb"

 $< ck\ Yj\ Yfzh\ YmbYYX hc '_YYd'dUWY'k\]h\ h\ Y'7i\ Vgz'k\ c'W'ffYbhm g]h'Z]j\ Y'[\ Ua\ Yg'U\ YUX']b'h\ Y'X]j\]g]cb'''=Z'h\ Y'7UfX]bU`g'Z]bX h\ Ya\ gY`j\ Yg'ZU``]b[\ 'Zi\ fh\ Yf'VY\]bXz']h'a\ Um``YUX'hc'U'dU]bZi\ `'gY``!cZZ\ Uh'h\ Y'hfUXY'XYUX`]bY'''HfUXY'gdYW'\ `Uh]cb'gi\ ffci\ bXg'g][\ b]Z]WUbh\ bUa\ Yg']bWi\ X]b[\ 'ghUfh]b[\ 'd]hW\ Yfg'9f]_':\ YXXY'UbX'A\]`Yg'A\]_c`Ugz\ U`cb[\ 'k\]h\\ `WcgYf'FmUb'<Y`g`Ym'''9j\ Yb'j\ YhYfUb'ghUfg``]_Y'Bc`Ub\ 5fYbUXc'UbX'K\]`gcb'7cbhfYfUg'Wci\ `X'VY'Wcbg]XYfYXz'U`h\ ci\ [\ 5fYbUXc'\Ug'dfYj\]ci\ g`m'b]|\ YX'U'a\ cj\ Y'hc'h\ Y'< ci\ ghcb'5ghfcg''\$

$K \setminus Uh'h \setminus Y': Ubg'7Ub'9IdYWh$

 $\label{thm:continuous} 5g`ZUbg`[YUf`id`Zcf`h\Y`idWca]b[`[UaYgž`h\Ym`WUb`WUhW\`U```h\YUWh]cb`cb`h\Y`:Ub8iY``Gdcfhg`BYhk cf_ž`UWWgg]V`Y`h\fci[\ai`h]d`Y`WUV`Y`UbX`ghfYUa]b[`dfcj]XYfg`UWfcgg`h\Y`7UfX]bU`ghY`Yj]g]cb`Zcchdf]bh"`@cWU``j]YkYfg`WUb`Z]bX`h\Y`W\UbbY``h\fci[\dfcj]XYfg``]_Y`7\UfhYf`GdYWhfia`UbX`7caWUgh`LZ]b]hm"`Gcž`[fUVmcif`gbUW_g`UbX`gYhh`Y`]bhc`mcif`WciW\]hg`[c]b[`hc`VY`Ub]bhYbgY`$bY`Zcf`7UfX]bU``BUh]cb°$

5g'h\Y'Xi gh'gYhh`Yg'UZhYf'YUW\'[Ua Yž'h\Y'hfi Y'gWcdY'cZ'h\Y 7UfX]bU`g 'd`UmcZZ'Ua V]h]cbg'k]``'Wca Y']bhc'ZcW'g"'K]``'h\Ym\i b_Yf'Xck b'UbX'di g\'Zcf'U'd`UmcZZ'gdchž'cf'k]``']h'VY'U'gYUgcb'cZfYVi]`X]b[3'H\Y'bYI h'ZYk 'k YY_g'UfY'd]j chU`ž'UbX'ZUbg'UWfcgg:`cf]XU UbX'VYmcbX UfY'\c`X]b['h\Y]f'VfYUh\'Zcf'U'hi fbUfci bX"K]h\'h\Y'f][\h'XYW]g]cbg'UbX'dYf\Udg'U'V]h'cZ'`i W_ž'h\Y'7UfX]bU`gWci `X'gh]``'dYb'U'gi WWYggZ `'W\UdhYf'Zcf'h\]g'gYUgcb"

cfcb[c]b[idXUhYgcb'YjYfmh\]b[i7UfX]bU`g!fY`UhYXž']bWiX]b[[Ua Y'gW\YXi `Yg'UbX'VfcUXWUghgž'W\YW_cih'h\Y'`UhYgh'cZZYf]b[g Zfca 'A @6"Wca "'5bX'Ug'Zcf'h\cgY'hfUXY'X]gW'gg]cbg3'GhUm'hibYX° K]h\'YjYfm'gk]b[icZ'h\Y'VUhž'Ubmh\]b[iWci`X'\UddYb"

8 Y hU]`g	
Cfh	Gh":@ci]gž:IG5
EiY``Yb	• k k k "g]"Wca
	• kkk"a`V"Wca
	• k k k "gdcfh]b[bYk g"Wca

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