

6i bXYggcn]U`[Yf]WXh.: fY]k]``][Y FYbhYbVY]hfÀ[Y'nÀ\`Yb'b]WXh'ni f ; fi bXfYbhY°

 $8 \ Ug`6i \ b \ X \ Y \ ggc \ n] \ U`[\ Yf] \ WA \ h`]b`? \ UggY``\ Uh`Yb \ hg \ WA] \ Y \ X \ Yb \ ZfY]k \]``][\ Y`6Y] \ hf \ U[\ gnY] \ hYb \ b] \ WA \ h` \ ZØf`X]Y`; \ fi \ b \ X \ f \ yb \ Y \ nA \ `Yb''$



? UggY`ž'8 Yi hgWk`Ub X`!' ≠b`Y]bYf'f]Wk hi b[gk Y]gYbXYb
9bhgWkY]Xi b[`\UhiXUg'6i bXYggcn]U`[Yf]Wk h'fl6G; Ł'5bZUb['¾ b]
&\$&) ']b'?'UggY`'Y]bY'?`U[Y'Y]bYg'FYbhbYfg'UV[Yk]YgYbž'XYf'Ui Z
Y]bYb'; fi bXfYbhYbni gWk`U['[Y\cZZh'\UhhY"8Yf'A Ubb'\UhhY'ØVYf
&* '≯J\fY'ZfY]k]``][Y'6Y]hfÀ[Y'gck]Y'&' \$'A cbUhY'DZ]WkhVY]hfÀ[Y']b
X]Y'[YgYhn`]WkY'FYbhYbj Yfg]WkYfi b['Y]b[YnU\`h"8cWk'XUg
; Yf]WkhYbhgWk]YXž'XUgg'bi f'X]Y'DZ]WkhVY]hfÀ[Y'ZØf'XYb
; fi bXfYbhYbni gWk`U['nÀ\`Ybž'k Ug'ZØf'j]Y`Y'6YhfcZZYbY'Y]bY'\YfVY
9bhhÀi gWki b['XUfghY``h"

 $8 \ Y \ f'? \ \hat{A} \ [\ Y \ f' \ Uf[\ i \ a \ Y \ bh] \ Y \ fh Y \ z' \ g Y] \ b \ Y' \ Zf Y] \ k \]``] \ [\ Y \ b' \ N \ U \ i \ b \ [\ Y \ b' \ g Y] \ Y \ b' \ Y \ b' \ Y \ f' \ Y \ f'' \ A \ fh Y \ b z'' \ X \ Ugg$

 $\label{thm:continuous} $$Yg^*g][\ b]Z]_UbhY^*I\ bhYfgWX]YXY^*nk\]gWXYb^*DZ]WXhI^*i\ bX^*ZfY]k\]^*][$$JYfg]WXYfhYb^*[\ YVY''^8]Yg^*]gh^*b]WXh^*bi\ f^*ZØf^*XYb^*U_hi\ Y^*Yb^*:\ U^*^*j\ cb^*\\ 6YXYi\ hi\ b[\ z^*gcbXYfb^*_ObbhY^*Ui\ WX^*5i\ gk\]f_i\ b[\ Yb^*Ui\ Z^*X]Y^*\\ 5bgdfØWXY^*UbXYfYf^*GY^*VghghAbX][\ Yf^*\setminus UVYbz^*X]Y^*YVYbZU^*^g\\ ZfY]k\]^*)[\ Y^*6Y]hfA[\ Y^*[\ YnU\setminus h^*\setminus UVYb''^@Ui\ h^*XYa^*6G;\ g]bX^*bi\ f^*X]Y^*\\ NY]hYb^*a\]h^*DZ]WXhVY]hfA[\ Ybz^*?\]bXYfYfn]Y\setminus i\ b[\ gnY]hYbz^*DZ^Y[\ YnY]hYb^*i\ bX^*?fUb_Yb[\ Y^*XnY]hYb^*fY^*Yj\ UbhYg^*;\ fi\ bXfYbhYbnY]hYb^*/\\ ZfY]k\]^*)[\ Y^*6Y]hfA[\ Y^*k\ YfXYb^*\setminus]Yf^*b]WXh^*UbYf_Ubbh''$

8 Yf' <]bhYf[fi b X 'X Yf'; fi b X f Y b h Y

8]Y '9bhgWXY]Xi b['XYg'6G; '\Uh'X]Y'8]g_i gg]cb'YbhZUWXhžcV'Yg'ZU]f
]ghž'XUgg'ZfY]k]``][Y'6Y]hfU[gnY]hYb'b]WXh'ni f'6YfYWXbi b['XYf
; fi bXfYbhY'nÀ\`Yb"'6Øf[Yf!; Y`X'j YfXYi h`]WXhž'XUgg
<i bXYfhhUi gYbXY'A YbgWXYb']b'À\b`]WXYb'G]hi Uh]cbYb'k]Y'XYf
?`À[Yf'VYhfcZZYb'g]bX"'8]YgY'?`U[Y'i bX'X]Y'5V`Y\bi b['XYf
ZfY]k]``][Yb'6Y]hfU[gnY]hYb'_ObbYb'Y]b][Y'XUni 'VYk Y[Ybž'X]Y
Y][YbY'5`hYfqj cfqcf[Y'bYi 'ni 'ØVYfXYb_Yb"

K UgʻVYXYi hYhʻXUgʻZØfʻni $_$ ØbZh][YʻFYbhbYf3

8]Y'8Yi hgWXY'FYbhYbj Yfg]WXYfi b['VYhcbh'X]Y'_`UfY'HfYbbi b[nk]gWXYb'DZ]WXhl'i bX'ZfY]k]``]['JYfg]WXYfhYb"'K À\fYbX'VYgh]a a hY GY`VghghÀbX][Y'i bX'5fVY]hYf'dZ]WXhj Yfg]WXYfh'g]bXž'\UVYb ZfY]k]``]['JYfg]WXYfhY'X]Y': fY]\Y]hž'X]Y'<Ò\Y']\fYf'6Y]hfÀ[Y'gY`Vgh ni 'VYgh]a a Yb'i bX'gc[Uf'Ui gni gYhnYb"'8cWX'X]YgYf'5i ggWX`i gg j ca '; fi bXfYbhYbni gWX`U['_ObbhY'U`g'i bj cfhY]`\UZh'Ya dZi bXYb

k YfXYb"'9g'nY][h'g]W\ž'XUgg'X]Y': fY]k]``][_Y]h'b]W\h'bi f'Y]bY 7\UbW'ni f'J YfVYggYfi b['XYg'F YbhYbUbgdfi W\g'V]YhYhž'gcbXYfb Ui W\'dchYbn]Y``Y'BUW\hY]`Y'a]h'g]W\'Vf]b[h"

: Øf'6YhfcZZYbYž'X]Y'Yhnh'_Y]bYb'5bgdfi W. 'Ui Z
; fi bXfYbhYbni gW. `U['\UVYbž'V`Y]Vh'bcW. 'X]Y'A Ò[`]W._Y]hž
; fi bXg]W.Yfi b['ni 'VYUbhfU[Yb"'8cW. 'X]Y'I bg]W.Yf\Y]h'ØVYf'X]Y
5bYf_Ybbi b['ZfY]k]``][Yf'6Y]hfU[gnY]hYb'V`Y]Vhž'i bX'Yg']gh'_`Ufž
XUgg'X]YgYg'H\Ya U'k Y]hYf\]b'ZØf'; YgdfÀW.gghcZZ'gcf[Yb'k]fX'
b]W.h'bi f'i bhYf'XYb'FYbhbYfbž'gcbXYfb'Ui W.']bbYf\U`V'XYf
dc`]h]gW.Yb'8YVUhhYb'ni f'5`hYfgj cfgcf[Y']b'8Yi hgW.`UbX"

8YhU]`g	
Cfh	? UggY`ž'8 Yi hgW\`Ub X
EiY``Yb	• k k k "fi \f&("XY
	k k k "Vi Yf[Yf![Y`X"cf[
	• k k k "XYi hg\\XY!
	fYbhYbj Yfg]WXYfi b["XY

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