

: U`gWXY'8UWXXYW_Yf'VYhfØ[Yb'+)!≯\\f][Y]b'NYi `YbfcXU!Hf]YVYg°

I bVY_UbbhY HÀhYf VYhfØ[Yb +)! A\f][Y]b; fY]n. GYb]cfYbUi Z[YdUggh 6Yhfi [ga UgWXY U`g'8 UWXXYW_Yf Ui Z[YXYW_h"



NYi `YbfcXU!Hf]YVYgž'8Yi hgW `UbX '! '\ XYb ``YhnhYb `HU[Ybki fXY'X]Y Dc`]nY] ']b NYi `YbfcXU!Hf]YVYg f@UbX_fY]g'; fY]nŁU`Ufa]Yfhž'bUWXXYa 'Y]b DUUf'_f]a]bY``Yf' 8UWXXYW_Yf 'Y]bY+)! 'À\f][Y'GYb]cf]b 'VYhfc[Yb'\Uh"'@Uih '\ 5 bhYbb 'H\ Øf]b[Yb[UVYb'g]WX'X]Y 'VY]XYb iibVY_UbbhYb 'HÀhYf'i bhYf'XYa 'Jcfk UbXž A]hUfVY]hYf'Y]bYf'8UWXXYW_YfZ]fa U'ni 'gY]bž'Ni hf]hh'ni f'Kc\bib[XYf'GYb]cf]b"'K À\fYbX'g]Y'g]WX'a]h']\f']b 'Y]b'; YgdfÀWX j Yfk]W_Y`hYbž'ZcfXYfhYb'g]Y'Y]bY'JcfUignU\`ib['ZØf'Ub[YV`]WXYFYdUfUhifUfVY]hYb"

8]Y'A UgW\Y'[Y`Ub[']\bYb'gW\Ua `cgž'XYbb'i bVYa Yf_h'_cbbhYb g]Y']a '5bgW\`i gg'6Uf[Y`X']a '\c\Yb'j]YfghY``][Yb'6YfY]W\'ghY\`Yb" 9fgh'U`g'X]Y'A ÀbbYf'X]Y'K c\bi b['j Yf`]Y»Yb'i bX'b]W\h'k]Y $\label{eq:continuous} $$ yfgdfcWXYb ni fØW_Ua Ybž'VYa Yf_hY'X]Y'GYb]cf]b'XYb'6Yhfi ["GcZcfh']bZcfa]YfhY'g]Y'X]Y'Dc`]nY]ž'X]Y'bi b'X]Y'9fa]hh`i b[Yb Ui Z[Ybca a Yb'\Uh"'8]Y'?f]a]bU`dc`]nY]'V]hhYh'U``Y'NYi [Ybž'X]Y j YfXÀWXh][Y'DYfgcbYb'[YgY\Yb'\UVYb'cXYf'<]bk Y]gY'[YVYb_\DbYbž'g]WX'ni 'a Y`XYb"$

K Ufbi b[Ybii bXi=bZcfa Uh]cbYb

8]Y 'Dc`]nY]'k Ufbh'Y]bXf]b[`]WX'j cf'À\b`]WXYb'6Yhfi [ga UgWXYbž'X]YGYb]cfYb'[Yn]Y`h']bg'J]g]Yf'bY\a Yb"'C Zh'dUgg]Yfh'Ygž'XUgg6YhfØ[Yf'U`g'<UbXk Yf_Yf'Ui ZhfYhYb'i bX'j cfhÀi gWXYbž'XUggXf]b[YbXY'5fVY]hYb'bchk YbX]['g]bX"'9]b'U_hi Y``Yf'6Yf]WXh'j cbXYb'6UX]gWXYb'BYi YghYb'BUWXf]WXhYb'nY][hž'XUgg'X]YgYgc[YbUbbhYb' 8UWX\U]Y ']b'XYf'FY[]cb'VYfY]hg'a Y\fYfYN\bhUi gYbX'9i fc'YfVYi hYh'\UVYb' ']bg[YgUa h'ØVYf'%\$\$"\$\$\$9i fc'gY]h'A Àfn"

8]Y 'HÀhYf'j Yfk YbXYb'c Zh'j Yfa Y]bh`]W\Y':]fa YbZU\fnYi [Y'i bX j Yfa]hhY`b'XYb'9]bXfi W_Z'gYf]ÒgY' < UbXk Yf_Yf'ni 'gY]b"'6YgcbXYfg dYfZ]XY']ghz'XUgg'g]Y']b'Y]b][Y': À``Y'X]Y'GYb]cfYb'gc[Uf'ni f'6Ub_ [YZU\fYb'\UVYbz'i a 'Xcfh'6Uf[Y`X'UVni \c`Yb"'8]Yg'nY][h'XYi h`]W\Z XUgg'X]Y'6YhfØ[Yf'gY\f'[i h'j cfVYfY]hYh'i bX'a Ub]di `Uh]j 'g]bX"'9]b <]bk Y]g. '8]Y'Dc`]nY]'fÀh'Y]bXfØW_`]W\Z'_Y]bY < UbXk Yf_Yf`Y]ghi b[Yb'Ub'XYf' < Ui ghØf'ni '_Ui ZYb'cXYf'ni i bhYfgW\fY]VYb'i bX']a 'Nk Y]ZY`gZU``X]fY_h'5b[Y\Òf][Y'cXYf'X]Y Dc`]nY]'ni '_cbhU_h]YfYb"

GWXi hna U» bU\a Yb ZØf GYb]cfYb

8]Y J cf[Y\Ybgk Y]gYb XYf 6YhfØ[Yf k YfXYb]a a Yf fUZZ]b]YfhYf i bX n]Y Yb [Yn]Y h XUfUi Z UVž À hYfYb A YbgWX Yb]\f J Yfa Ò[Yb ni Ybhc W_Yb" C Zha U g k YfXYb B ch U[Yb j cf[YhÀi gWX h c XYf j]Y ni [i hY ; YgWX À ZhY Ub[YVchYb" I a "GYb]cfYb j cf gc `WX Yb 6YhfØ[YfY]Yb ni gWX ØhnYbž \ Uh XUg 6i b XYga]b]ghYf]i a "ZØf : Ua]`]Yž GYb]cfYbž: fUi Yb i bX ¾ [YbX Y]bY \]`ZfY]WX Y 6fcgWX ØfY a]h XYa 'H]hY` F UhY a U ž k Yf XfUb ']gh3 'j Yf OZZYbh`]WX h" 8]YgY Ybh\ À h k Yfhj c ``Y 'H]ddgž k]Y a Ub 6YhfØ[Yf Yf Ybbh'i bX [YY][bYhY GWX i hna U» bU\ a Yb Yf[fY]Zh" K Y]hYfY & Zcfa Uh]cbYb

_ObbYb 'Ui Z'XYf'K YVgY]hY 'XYg'A]b]ghYf]i a g'Y]b[YgY\Yb'k YfXYbž k]Y '6A : G: >'VYf]W\hYh''

9g']gh'Y]bY'Xf]b[YbX'VYbÒh][hY'9f]bbYfi b['Ub'U``'YbYž'X]Y']a I a [Ub['a]h'< UbXk Yf_Yfb'cXYf'j Yfa Y]bh`]W\Yb'8]Ybgh`Y]ghYfb j cfg]W\h][Yf'gY]b'gc``hYb"'GYbg]V]`]g]YfYb'G]Y' \Rightarrow fY'5b[Y\Òf][Yb i bX'6Y_UbbhYbž'VYgcbXYfg'GYb]cfYbž'XUa]h'gc`W\Y 6Yhfi [ga UgW\Yb'b]W\h'k Y]hYf'i a 'g]W\'[fY]ZYb'_ÒbbYb"

8 Y hU]`g	
Cfh	NYi `YbfcXU!Hf]YVYgž'8Yi hgWX `UbX
EiY``Yb	• k k k "UbhYbbYh\i Yf]b[Yb"XY
	• Vbb"XY
	• k k k "Va ZgZ^"XY

6Ygi WXYb G]Y i bg Ui Z. b!U["bYh