

?=fYj c`i h]cb]Yfh'XYb 'Hci f]ga i g. K cf_g\cdg']b 'Hi ``b 'ghUfhYb 'Xi fW\'

9fZU\fYb'G]Yž'k]Y'K cf_g\cdg'ni f'?=']a 'Hci f]ga i g']b B]YXYfÒghYffY]W\'dfUl]gbU\Y'=a di `gY'ZØf'ØVYf'((\$HY]`bY\a Yf'V]YhYb"



 \pm 0 'Ni gUa a YbUfVY]h'a]h'9l dYfhYb'k]Y'D\]`]dd!H\ca Ug'A Ø``Yf'j cb XYf': < 'Gh"'DÒ`hYb'i bX': UW\`Yi hYb'XYf': < 'C VYfÒghYffY]W\'k YfXYb

]bbcj Uh]j Y ?cbnYdhY j Yfa]hhY `h" `8]YgY `\dangle]h]Uh]j Y `n]Y `h `XUfUi Z`UVž XYb ``c_U`Yb `Hci f]ga i g`Xi fW `XYb `9]bgUhn j cb `? \denoting i bhYfghØhnYb i bX `X]Y `K YhhVYk YfVgZÀ\][_Y]h `XYf `FY[]cb `ni `ghY][Yfb", VYf ((\$HY]`bY\a Yf `\UVYb `VYfY]hg`X]Y `A O[`]W_Y]h `k U\f[Ybca a Ybžg]W_cghYb`cg`k Y]hYfni V]`XYb `i bX j cb `XYb `5b[YVchYb `ni `dfcZ]h]YfYb"

K cf_g\cd!HYfa]bY'i bX'5ba Y`Xi b[

8]Y'bÀW\ghYb'HYfa]bY'XYf'K cf_g\cd!FY]\Y'g]bX'VYfY]hg ZYgh[Y`Y[hi bX'`UXYb'ni f'U_h]j Yb'HY]`bU\a Y'Y]b.

-) "' $\not\Rightarrow$ b]ž'\$-.\$\$ %'.\$\$'I \fž'FY`UI FYgcfh'?ch\a Ø\`Yž BYi \cZYb'Ub'XYf'MVVg'fA cghj]YfhY`Ł
- %, "'> b]ž'%(.\$\$ %, .\$\$`I \fž'GW\`cgg'<U]bXcfZž'@Ub[Yb`c]g fBcbUi '/ 'K U`Xj]YfhY`Ł
- &' "' \Rightarrow b]ž'\$-.\$\$ %'.\$\$'I \fž': < 'K]YbYf'BYi ghUXh'fK]YbYf 5`dYb'i bX'K]YbYfk U`XŁ

8Yf6`]W_UiZ?=]a Hcif]gaiggY_hcf

BYVYb`X]YgYb`fY[]cbU`Yb`\D]h]Uh]j Yb`gd]Y`h'Ui W\`X]Y`9I dYfh]gY`j cb I bhYfbY\a Yb`k]Y`FYU`]n]b[`Dfc[fYgg`Y]bY`nYbhfU`Y`Fc``Y"`8]YgYg HYUa `]gh'Ui Z'X]Y`? Øbgh`]W\Y`\DhY``][Ybn`f?\\D\]a `Hci f]ga i ggY_hcf gdYn]U`]g]Yfh'i bX`V]YhYha U»[YgW\bY]XYfhY`: cfa UhY`Ubž`X]Y`j cb \Dada di `gj cfhfà[Yb`Ui Z'Hci f]ga i ghU[Yb`V]g`\]b`ni `]bhYfU_h]j Yb K YV]bUfYb`fY]W\Yb"`5`YI `A]fgW\Y`ž'Y]b`GUW\j Yfgh\bX][Yf`]a Hci f]ga i gUi ggW\i gg`XYg`8 Yi hgW\Yb`6i bXYghU[Ygž`\Uh'ni XYa X]Y`7\UbW'i bX`X]Y`<YfUi gZcfXYfi b[Yb`XYf`?=]a `Hci f]ga i g`]b XYb`: c_i g`[Yf@W_h"

 $FYU`]n]b[`Dfc[fYgg`ibhYfghØhnh`lbhYfbY\aYb`VY]`ghfUhY[]gWXYb$$9bhgWXY]Xib[Yb`ibX`DfcXi_hYbhk]\w_`ib[Yb"8ifWX`]\fY`<]`ZY _\ObbYb`bYiY`AO[`]WX_Y]hYb`XYf`?=\YbhZU`hYh`kYfXYbž`X]Y`b]WXh`bif$

8]Y'JYfV]bXi b['X]YgYf'dfUl]gbU\Yb'K cf_g\cdg'a]h'XYf'9ldYfh]gY j cb'FYU`]n]b['Dfc[fYgg'ghY``h'Y]bY'kYfhj c``Y'FYggcifWY'XUfž'ia XYb'Hcif]gaig']b'B]YXYfÒghYffY]W\'ni_ibZhgZÀ\]['ni'[YghU`hYb" Gc'k]fX'XYf'9]bgUhn'jcb'?=b]W\h'bif'U`g'<YfUigZcfXYfib[ž gcbXYfb'U`g'7\UbW'ZØf'Y]bY']bbcjUh]jY'9bhk]W_`ib['XYg'GY_hcfgjYfghUbXYb"

: Øf`XYhU]``]YfhY` ⇒ Zcfa Uh]cbYb`ni `XYb`K cf_g\cdg'i bX`XYa 9]bgUhn'j cb'? =]a `Hci f]ga i gž'VYgi WXYb'G]Y'A Y]b6Yn]f_'i bX` FYU`]n]b[`Dfc[fYgg"

8 YhU]`g	
Cfh	Hi``bž ^{·2} ghYffY]WX
EiY``Yb	k k k "a Y]bVYn]f_"Uh
	k k k "fYU`]n]b[dfc[fYgg"Wca

6Ygi WXYb G]Y i bg Ui Z Y]bY!fY]gY "XY