

5_h]cbgk cWXY'[Y[Yb'; Yk U`h. @]WX hYbVYf['gYhnh'Y]b'ghUf_Yg'NY]WXYb

9fZU\fYb'G]Y'U``Yg'ØVYf'X]Y'5_h]cbgk cW\Y']a '6Yn]f_
@]W\hYbVYf['jca'%, "'V]g'&) "'Bcj Ya VYf'&\$&(ž'X]Y'Ub`Àgg`]W\
XYg'\dhYfbUh]cbU`Yb'HU[Yg'[Y[Yb'; Yk U`h'Ub': fUi Yb'i bX
A ÀXW\Yb'ghUhhZ]bXYh''Cf[Ub]g]Yfh'jcb'Yb[U[]YfhYb
5_hYi f]bbYbž'V]YhYh'X]Y'K cW\Y'K cf_g\cdgž'@Ygi b[Yb'i bX
Y]bY'; fc>XYa cbghfUh]cb'ni f'6Y_Àa dZi b['jcb'; Yk U`h'i bX
8]g_f]a]b]Yfi b["'GY]Yb'G]Y'XUVY]'i bX'gYhnYb'G]Y'Y]b
NY]W\Yb'ZØf'Y]b'[Yk U`hZfY]Yg'@YVYb'



"Jca %, "'V]g'&) "'Bcj Ya VYf'&\$&('VfcXY`h']a '6Yn]f_
@]W\hYbVYf['XYf'? Ua dZ'[Y[Yb'; Yk U`h'Ub': fUi Yb'i bX'A ÀXW\Yb'
5b`Àgg`]W\ 'XYg'♣\hYfbUh]cbU`Yb'HU[Yg'[Y[Yb'; Yk U`hž'XYf'Ua '&) "
Bcj Ya VYf'VY[Ub[Yb'k]fXž'ghUfhYh'Y]bY'a]hfY]» YbXY
5_h]cbgk cW\Y"'<]bhYf'X]YgYa '_fUZhj c``Yb'9fY][b]g'ghY\Yb\cW\Yb[U[]YfhY'♣)h]UhcfYb'k]Y'9j U'?UfdZž'X]Y
; `Y]W\ghY``i b[gVYUi ZhfU[hY'XYg'6Yn]f_gži bX'k Y]hYfY

`Y]XYbgW\UZh`]W\Y`5_h]j]gh]bbYb`k]Y`BY U`DYhYf`Y`j cb`XYf

K]``_ca a Ybg_i `hi f`gck]Y`;]i `]U`6U`X]ggYff]!6Yb_c`j ca
: fUi Ybdfc Y_h` : Øf`G]Ył "'5i W\`@UfU`GW\a]X[U```j ca '6Øf[YfhfYZZ
; Ya Y]bgUa ']a '?]Yn``YVYb 'Vf]b[h`]\fY`Gh]a a Y`Y]b"; Ya Y]bgUa
Yf\YVh`X]YgY`; fi ddY`X]Y`Gh]a a Y`[Y[Yb`X]Y`gW\cW_]YfYbXYb
JYf\À`hb]qqYž`X]Y`: fUi Yb`]b`i bqYfYf'; YqY``qW\UZh`Yf`YVYb```

Yk U`h'[Y[Yb': fUi Yb'i bX'A ÀXWXYb']gh'bUWX'k]Y'j cf'V]hhYfY FYU`]hÀh''8]YgYg'9b[U[Ya Ybh']gh'Y]bY'[YgUa h[YgY``gWXUZh`]WXY 5i Z[UVY° 'VYhcbh'6Yn]f_gVØf[Yfa Y]ghYf'A Ufh]b'GWXUYZYf'ff781 Ł'' 9f'a UWXh'XYi h`]WX.' <Ài g`]WXY'; Yk U`h'_Ybbh'_Y]bY'; fYbnYb' b]WXh']b'6]`Xi b[gghUbXž'<Yf_i bZh'cXYf'5`hYf'''5i WX'A ÀbbYf a ØggYb'g]WX'_`Uf'i bX'i ba]ggj YfghÀbX`]WX'dcg]h]cb]YfYb.'8Ug Xi `XYb'k]f'b]WXh° 'A]h'X]YgYf'_`UfYb'6chgWXUZh'fi Zh'Yf'U``Y @]WXhYbVYf[Yf'XUni 'Ui Zž'U_h]j 'ni 'k YfXYb'i bX'g]WX'b]WXh k Y[ni Xi W_Yb''

5_h]cbYb i bX 9j Ybhg ZØf U``Y°

"8 Ug Dfc [fUa a 'V]YhYhini XYa 'gdUbbYbXY'K cf_g\cdg 'H\Ya Yb k]Y Nm_`i g i bX J Yf\Øhi b ['ghY\Yb 'YVYbgc 'Ui Z'XYf'5 [YbXU'k]Y gdYn]Y ``Y 'GW\i hnY]b\Y]hYb 'ZØf': fUi Yb 'a]h'6Y\]bXYfi b [Yb "'9]b [Ubn'VYgcbXYfYf' < Ò\Ydi b_h '5a : fY]hU[\check{z} '&&"'Bcj Ya VYf'&\$&(jcb'%\$.\$\$'V]g'%' .\$\$'I \f'Ybh\Ø``Yb'X]Y'6 \(\deq \! < ch`]bY'i bX'Y]b : fUi Yb\Ui g' < UbX`i b [gghfUhY []Yb'ni a 'I a [Ub['a]h'\Ài g`]W\Yf : Yk U`h' 'XUg'6Yf`]bYf' <]`ZYgmghYa 'k]fX'ZØf'U``Y'ni [Àb[`]W\ [Ya UW\h' '9]bY'5ba Y`Xi b [']gh'YfZcfXYf`]W\'i bhYf ZfUi Ybdfc Y_h4 j Uj !\\Ui gYb"XY"''

``8Yb`_fÒbYbXYb`5VgW\`i gg`XYf`5_h]cbgk cW\Y`V]`XYh`X]Y Y]bXfi W_gj c``Y`; fc»XYa cbghfUh]cb` @Uggh'i bg`f[Yk U`hZfY]Ł``YVYb° $\label{thm:condition} $$ -\frac{ghUbVi `!?cbj Ybh]cb'i a gYhnYb'>9HNH° `Ua `A cbhU[ž`&) "$$ Bcj Ya VYf`&$&(`i a `%*.$$`I \f''`G]Y'n]Y\h'Xi fW\'X]Y'GhfU>Yb 6Yf`]bg'V]g'ni a `5V[YcfXbYhYb\Ui g']b'XYf'B]YXYf_]fW\bYfghfU>Y) ž'a]hhYb']a '<YfnYb'XYf'dc`]h]gW\Yb'8]g_i gg]cb' 'Y]b'YW\hYg NY]W\Yb'ZØf'JYfÀbXYfi b[°''$

.

8 Y hU]`g

6Ygi WXYb G]Y i bg Ui Z. a Y]b!VYf `]b "bYh