

K YbXY']b'J Ub'7Ub\.'9fZc`[fY]WXY A U»bU\a Yb'[Y[Yb'?]bXYfY\Yb°

9]b'6Yf]W\h'ØVYf'X]Y': cfhgW\f]hhY'i bX'<YfUi gZcfXYfi b[Ybjcb'DfcY_h', ']b'JUb'7Ub\'ni f'6Y_\Aa dZi b['jcb'?]bXYfY\YbibX': \OfXYfi b['XYf'; YgW\'YW\hYf['Y]W\\Y]h"



J Ub '7 Ub \ ž'J]Yhb Ua '! '8 Yf'8]ghf]_h'J Ub '7 Ub \ ']b'J]Yhb Ua '\ Uh']b

XYb '`YhnhYb '\\J\fYb 'Yb hg\X\Y]XYb XY : cfhg\X\f]hhY 'VY] 'XYf

6Y_\Aa d Z b['j cb '?]b XYfY\Yb 'i b X 'XYf': \OfXYfi b['j cb

; Yg\X\ `Y\X\hYf[`Y]\X\\Y]h'[Ya U\X\h'': fUi 'D\Ua 'H\]'H\i m\Z

Df\Ag]XYb h]b 'XYf': fUi Ybi b]cb 'XYg'8]ghf]_hg\Z'Yf\Ai hYfh\Z'XUgg'\Zf\O\YfY

< Y]f\Uhgdf\U_h]_Yb']b '\XYf'FY[]cb'g\X\ K Yf'ni '\Ab\XYfb'k UfYb''\\XXc\X

 $\label{lem:condition} $$ \u^9b[U[Ya Ybh^j]Y^ZA^h][Yf^Dfc^Y_hYz^j]bgVYgcbXYfY^Dfc^Y_h, z^X]Y^6Yk i gghgY]bgV]^Xi b[^j YfghAf_h''$

Dfc Υ_h , i a ZUgghY]b BYhnk Yf_j cb'') 7ca a i b]hmlA YX]YbhYUa g i bX'j YfgWX]YXYbYb 7`i Vgž'X]Y'g]WX ZØf'X]Y'5i Z_`Àfi b['ØVYf'X]Y bY[Uh]j Yb'5i gk]f_i b[Yb'j cb'?]bXYfY\Yb'i bX'\Ài g`]WXYf'; Yk U`h Y]bgYhnYb"8Uni '[Y\ÒfYb'Ui WX'XUg'8]U`c[dfc[fUa a ' < ÒfYb'G]Y =\fYb'?]bXYfb'ni 'i bX'X]Y'@YUXYfg'cZ'7\Ub[Y'7`i Vg'Ub k Y]hYfZØ\fYbXYb'GWXi Yb"'@YhnhYfY'\UVYb'-\$'A]h[`]YXYfž'X]Y'U_h]j ØVYf'?]bXYfY\Yb']bZcfa]YfYb"

9fZc`[Y'i bX'<YfUi gZcfXYfi b[Yb

8]Y: fUi Ybi b]cb'Zc_i gg]Yfh'g]WX:VYgcbXYfg'Ui Z'X]Y'6YXØfZb]ggY j cb: fUi Yb'Ui g'Yh\b]gWXYb'A]bXYf\Y]hYbž'X]Y'cZh'a]h'ZfØ\Yb'i bX]bnYghi ÒgYb'9\Yb'_cbZfcbh]Yfh'g]bX"'Hfchn'XYf'Yfn]Y`hYb: cfhgWXf]hhY'[]Vh'Yg']a a Yf'bcWX'<YfUi gZcfXYfi b[Ybž'XU'j]Y`Y: Ua]`]Yb'Ub'U`hYb'6fÀi WXYb'ZYgh\U`hYb"

K]fhgWX UZh`]WX Y 'HY]`\ UVY 'i bX '; `Y]WX ghY ``i b[

9]bY'k]W\h][Y'JcfUiggYhnib['ZØf'X]Y'; `Y]W\ghY``ib['XYf; YgW\YW\hYf']gh'UiW\X]Y'k]fhgW\UZh`]W\Y'HY]`\UVY''@Uih'XYbU_hiY``Yb'8UhYb'jcb'XYghUh]g"XY']gh'Y]b'nibY\aYbXYf'5bhY]`'XYf6YjÒ`_Yfib['nk]gW\Yb'%)'ibX'*)'\J\\fYb'YfkYfVgh\h]['z'kcVY]UiW\X]Y'Fc``Y'XYf'YfkYfVgh\h][Yb'A@hhYf'jcb'6YXYihib[']gh''8Yf; YbXYf'DUm'; Ud'nY][h'niXYaz'XUgg':fUiYb'bUW\k]Y'jcf'kYb][YfjYfX]YbYb'U`g'A\habbYfz'kUg']\fY'k]fhgW\UZh`]W\Y'IbUV\\hab[][_Y]hVYY]bhf\hW\h][h'

Ni gÀhn`]W\`i bhYfgi W\h`XYf'; YbXYf'DYbg]cb'; Udž'k]Y
i bhYfgW\]YX`]W\`5`hYfgj cfgcf[Y!9]b_ØbZhY'j cb'A ÀbbYfb'i bX
: fUi Yb'g]bX"'8]Yg'g]bX'YggYbh]Y``Y'5gdY_hYž'X]Y'YVYbZU``g'ni f
; `Y]W\ghY``i b['XYf'; YgW\`YW\hYf'VY]hfU[Yb'a ØggYb"

Ni gUa a YbZUggYbX``Àggh'g]W\`gU[Ybž'XUgg'JUb'7Ub\`UiZ'Y]bYa
[ihYb'KY[']ghž'; `Y]W\ghY``ib['ibX'bUW\\U`h][Y'9bhk]W_`ib['niZÒfXYfb"'8]Y'ZcfhgW\fY]hYbXYb'JYfÀbXYfib[Yb']b'XYf
; Ya Y]bgW\UZh'ibX'X]Y'jYfghÀf_hY'GW\i`ib['ØVYf'; YbXYfZfU[Ybg]bX'YbhgW\Y]XYbXY'GW\f]hhYž'ia'ni'[YkÀ\f`Y]ghYbž'XUgg'?]bXYf
]a 'f]W\h][Yb'5`hYf'UiZkUW\gYb'ibX':fUiYb']b'XYf'; YgY``gW\UZhfYgdY_h]Yfh'kYfXYb"

8 i fWX 'XYb '9]bgUhn'j cb '6]`Xi b['i bX'gcn]U`Yb 'Dfc[fUa a Yb '\Uh XUg'Dfc 'Y_h', 'XUni 'VY][YhfU[Ybž'XUg'6Yk i gghgY]b 'ZØf; YgWX `YWX hYf[YfYWX h][_Y]h'ni 'gWX ÀfZYb'i bX'X]Y '@YVYbgei U`]hÀh']b J Ub '7 Ub\ 'ni 'j YfVYggYfbž'k À\fYbX'Yg'[`Y]WX nY]h]['X]Y < YfUi gZcfXYfi b[Ybž'X]Y 'ZcfhVYghY\Ybž'b]WX h'][bcf]Yfh"

J]YhbUa "j b VYf]W hYh'ØVYf'X]Y: cfhgW f]hhY']b'JUb'7Ub\ž k À\fYbX'XYghUh]g"XY'k]W h][Y'+bX]_UhcfYb'ni f'; `Y]W ghY``i b[XYf'; YgW `YW hYf'`]YZYfhž'X]Y'ZØf'Y]bY'i a ZUggYbXY'5bU`mgY\YfUb[Ync[Yb'k YfXYb'_ÒbbYb"

8 YhU]`g	
Cfh	JUb·7Ub\ž'J]YhbUa
EiY``Yb	• k k k "j]Y hb Ua "j b
	k k k "XYghUh]g"XY

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