

: i hi fY 'c Z'\ Y U`h\. '&\$\$ 'mci b ['d Y c d `Y U\h]j Y `m'g\ Ud Y ']b 'J]Y b b U °

5fci bX'&\$\$'mci b['dYcd`Y'dfYgYbhYX'WfYUh]j Y'\YU`h\ Wcbhf]Vi h]cbg'Uh'h\Y'mci h\'\YU`h\'WcbZYfYbWY']b'h\Y'%gh X]ghf]Wh'UbX'dfca chYX'k Y``!VY]b["



'H\Y'mci h\'\YU`h\'WcbZYfYbWY'cZZYfYX'mci b['dYcd`Y'U'd`UhZcfa 'hc UWh]j Y`m'XYU`'k]h\'j Uf]ci g'\YU`h\']ggi Yg"'H\Y'j YfgUh]`Y

Wcbhf]Vi h]cbg']bWi XYX'\YU`h\m'hUgh]b[gž'a cj]b['VfYU_gž
a]bXZi `bYgg'YI YfW]gYg'UbX'gY`Z'!fYZYWh]cb"'5'\][\`][\h'k Ug'h\Y
]a dfYgg]j Y'XUbWY'dYfZcfa UbWY'cZ'″='Ua 'C?″ž'k \]WX']a dfYgg]j Y`m
Ya d\Ug]nYX'h\Y']a dcfhUbWY'cZ'dUfh]W]dUh]cb'UbX'^c]bh
YI dYf]YbWY"'H\Y'h\Ya Y'fUb[Y'cZ'h\Y'WcbZYfYbWY'k Ug'k]XYž'Zfca
a cj Ya Ybh'UbX'bi hf]h]cb'hc'gWfYYb'h]a Y'UbX'WY``'d\cbY'UXX]Wh]cb
hc'U`Wc\c`"'

dUfh]W]dUh]cbcZmcib[dYcd`Y]bZcWg

'H\Y'Yj Ybh'bch'cb`m'ghccX'Zcf'WfYUh]j Y']XYUgž'Vi h'U`gc'Zcf'Ub
]a dcfhUbh'WcbWfb. 'h\Y'dUfh]W]dUh]cb'cZ'mci b['dYcd`Y']b'\YU`h\
dfca ch]cb'dfc'YWhg']g'VYWca]b[']bWfYUg]b[`m']a dcfhUbh"'H\Y'[cU`
]g'hc'WfYUhY'\YU`h\'!dfca ch]b['``]j]b['Ybj]fcba Ybhg"'H\]g'WU]a ']g
XYf]j YX'Zfca 'h\Y'K < C'ChhUk U'7\UfhYf'Zfca '%-, *"'5g'
\YU`h\ZcYfXYfi b["W\'z\"U'bYk'[i]XY'k Ug'U`gc'di V`]g\YX'h\Uh']g'Uh
h\Y'g]XY'cZ'h\Y'75D'a UbU[Yf\z\"gdYW]U`]gh'U[YbW]Yg'UbX'dfc'YWh
a UbU[Ya Ybh'k]h\'dfUWh]WU`gi ddcfh'a UhYf]U`g'Zcf'h\Y'UWh]j Y
dUfh]W]dUh]cb'cZ'mci b['dYcd`Y"'

"H\Y'WcbZYfYbW']g'U'gi WW'ggZi ``Yl Ua d`Y'cZ'h\Y'gi WW'ggZi `
]a d`Ya YbhUh]cb'cZ'gi W\'dUfh]W]dUh]cb'cZZYfg'UbX'WYUf`m'g\ck g
\ck ']a dcfhUbh']h']g'hc'[]j Y'mci b['dYcd`Y'U'j c]W\"'H\]g
dUfh]W]dUh]cb'bch'cb`m'WfYUhYg'\YU`h\'!dfca ch]b['`]j]b[
Ybj]fcba Ybhgž']h'U`gc'fU]gYg'Uk UfYbYgg'cZ']bWi g]j Y'WccdYfUh]cb"

giddcfhUbXZ]bUbW]b[

TH\Y']a d`Ya YbhUh]cb'cZ'h\Y'mci h\`\YU`h\`WcbZYfYbWY'hU_Yg'd`UWY]b'WccdYfUh]cb'k]h\`h\Y'=bgh]hi hY'Zcf'K ca Ybfg'UbX'A U`Y'<YU`h\UbX'Ei YfUi a "'7i `hi fU`'UbX'gcW]U`'fYgYUfW\"'H\Y'gi ddcfh'cZ'h\Y''YXYfU`'<YU`h\`5[YbWhž'k\]W\`Wcbhf]Vi hYg'hc'h\Y'Z]bUbW]b['cZ'h\Y]b]h]Uh]j Yž']g'dUfh]W'`Uf`m'bchYk cfh\m''K]h\`gc`]X'Zci bXUh]cbg'UbXh\Y'Wca a]ha Ybh'cZ'a Ubm'UWhcfgž'U'ghYd']g'hU_Yb']b'h\Y'f][\h

 $\label{lem:conditional} $$ H\Y'Z hi fY'cZ'YU'h\'dfca ch]cb']g']b'h\Y'\UbXg'cZ'h\Y'mci h\' H\fci [\Yj Ybhg'`]_Y'h\]g'k Y'WUb'Ybgi fY'h\Uh'mci f'WcbWYfbg'UbX$

 $\label{lem:condition} $$ [XYUg'UfY'\YUfX'UbX'k cf_'hc[Yh\Yf'cb'\YU'h\]Yf'']j]b[Ybj]fcba Ybhg'''_CHG''fYdcfhg'h\Uh'h\Y'mci h\'\YU'h\'WcbZYfYbWY']g Ub']a dcfhUbh'ghYd']b'h\]g'X]fYWh]cb'''$

8 YhU]`g	
Cfh	±bbYfY'GhUXhž'²ghYffY]WX
EiY``Yb	• k k k "chg"Uh
	[Ygi bX\Y]hgZcYfXYfi b["WX

6Ygi WXYb G]Y i bg Ui Z. a Y]b!k]Yb bYh