

## 9i fcdUg Dc`]h]\_Yf ZcfXYfb I bhYfgi Wi b[XYf 9G7!5Vgh]a a i b[ga Ub]di `Uh]cb°

Dc`]h]\_Yf`ZcfXYfb`, VYfdfØZi b[ 'XYf`HY`Yj ch]b[!9f[YVb]ggY XYg'9i fcj ]g]cb`Gcb[ '7cbhYgh'&\$&) ž'bUW\ 'J YfXUW\ h'Ui Z A Ub]di `Uh]cb"



6UgY`z`GWk k Y]n`!`5a ``\$"`A U]`&\$&) `\UVYb`a Y\fYfY
Gd]hnYbdc`]h]\_Yf`Y]bYb`cZZYbYb`6f]YZ`Ub`X]Y`96I `fPi fcdÀ]gW\Y
Fi bXZi b\_!`i bX`: YfbgY\i b]cbŁ`[ YgW\]W\_hz`]b`XYa `g]Y`Y]bY
j c``ghÀbX][ Y`, VYfdfØZi b[ `XYf`5Vgh]a a i b[ gYf[ YVb]ggY`VY]a
HY`Yj ch]b[ `XYg`9i fcj ]g]cb`Gcb[ `7cbhYgh`ZcfXYfb"`8]Yg`[ YgW\]Y\h
j cf`XYa `<]bhYf[ fi bX`j cb`gW\k Yfk ]Y[ YbXYb`J cfk ØfZYb
\]bg]W\h`]W\`a O[`]W\Yf`K U\`a Ub]di `Uh]cbYb`i bX`ghUUh`]W\Yf
9]bZi ggbU\a Y`Ui Z`XYb`K YhhVYk YfV"`GW\k AV]gW\Y"XY`VYf]W\hYhz
XUgg`X]Y`]gfUY`]gW\Y`HY]`bY\a Yf]b`M j U``FUd\UY``XUg`HY`Yj ch]b[
a ]h`&-+`Di b\_hYb`[ Yk cbbYb`\Uhz`YXcW\'j cb`XYb`¾ fcfYb`a ]h
`YX][`]W\`\*\$`Di b\_hYb`f%) "`D`UhnŁ`VYk YfhYh`k i fXY"

8]Y'JYfZUggYf'XYg'6f]YZYg'VYfi ZYb'g]WX'Ui Z'8UhYb'XYg'ZÀa]gWXYb

 $\label{thm:conditional_field} FibXZib\_g'fJFHŁz'X]Y'ibYf\_'Af']WXY'IbhYfgWX]YXY'nk]gWXYb\\ NigWXUiYfnU\'Yb'ibX'KU\'VYhY]'][ib[']a'NY]hfUia'&$&'!&$&)\\ UiZ[YnY][h'\UVYb''8]YgY':YghghY'`ib[Yb'\UVYb'ni'Y]bYa'5bgh]Y[XYf'NkY]ZY'`Ub'XYf'; Ø`h][_Y]h'XYf'5Vgh]aaib[g\_cghYb'XifWXbUh]cbU'Y'FibXZib_UbghU`hYb'[YZØ\fhz'kUg'U`g'5`Ufag][bU``ZØf'X]Y\\ 96I'[YkYfhYh'k]fX'''<math>\Rightarrow$ b'A\b`]WXYf'KY]gY'\Uh'X]Y'gdUb]gWXYFibXZib\_UbghU`h'FHJ9'Y]bY', VYfdfØZib[']\fYg'bUh]cbU`YbHY`Yjch]b[g'VYUbhfU[h''

## : cfXYfi b[Yb Ub X]Y 96I

 $\pm$ 0']\fYa 'GW\fY]VYb 'ZcfXYfb 'X]Y 'Dc`]h]\_Yf 'X]Y '961 'Ui Zž'Zc`[ YbXY GW\f]hhY 'ni 'i bhYfbY\a Yb.

- %" J Y f Ò ZZY b h`] W \ i b [ 'X Y f 'j c ``gh \ b X ] [ Y b 'Gh] a a U i gn \ \`i b [ \ \ \ \ U i Z [ Y g W \ `Ø g g Y `h ' b U W \ '@ U b X ' i b X ' 5 V g h] a a i b [ g a Y h \ c X Y "
- &"; YbY\a ][ib['Y]bYf'ibUV\Ab[][Yb'DfØZb['XYg 5Vgh]a a ib[qdfcnYgqYq'ZØf'&\$&)"
- ' " C ZZY b `Y [ i b [ 'U ``Y f 'K Y f 'Y Y f 'hf À [ Y "
- ("?`Afi b['j cb'6YgW.fAb\_i b[Yb'ZØf'ghUUh`]W.'[YZÒfXYfhY K YfVi b["
- ) " CZZYbY[ib[UYYfGdcbgcf]b[!JYfhfA[Y"]
- \* " 5bU`mgY`XYg`5Vgh]a a i b[ggmghYa g`i bX`JcfgW\`À[Y`ZØf bchk YbX][Y`ŸbXYfi b[Yb"

8]YgY'A U» bU\a Yb'gc``Yb'XYa 'JYfXUW\h'Ybh[Y[Ybk]f\_Ybž'XUgg ghUUh`]W\Y'GhY``Yb']b'X]Y'5Vgh]a a i b['Y]b[Y[f]ZZYb'\UVYb\_\ObbhYb"Jcf'U``Ya 'X]Y'6YhY]`][i b['XYf'ghUUh`]W\Yb']gfUY`]gW\Yb K YfVYU[Ybhi f'f@UdUa Ł'Ub'Y]bYf'? Ua dU[bY'ni f': OfXYfi b['XYg]gfUY`]gW\Yb'6Y]hfU[g'ZØf'&\$&) 'gcf[h'ZØf'5i ZfY[i b["

## DfcV`Ya Uh]\_ XYg HY`Yj ch]b[g

BUWX 'XYa '9i fcj ]g]cb'Gcb[ '7cbhYgh'&\$&) 'k i fXYb'Ui WX 'Nk Y]ZY`
Ub'XYb'5Vgh]a a i b[ gj YfZU\fYb'gY`Vgh``Ui h"'+bgVYgcbXYfY'X]Y
A Ò[`]WX\_Y]hža Y\f'U`g'nk Ubn][ a U`'ni 'k À\`Ybž'\Uh'X]Y
5i Za Yf\_gUa \_Y]h'XYf'Fi bXZ b\_UbghU`hYb'[ Yk YW\_h"'
9gW]bg][ \h"Wca 'VYf]WXhYhž'XUgg'XUg'HY`Yj ch]b[ gmghYa 'Xi fWX 'X]Y

9]bZØ\fib[ 'XYg' FYgh'CZ'H\Y'K cf`X '!: YUhi fYg'ØVYfUfVY]hYh kifXY"'<]YfVY]'k]fX'X]Y'?fYX]h\_UfhYbbi a a Yf'U`g'Y]bXYi h][ Yf ⇒ XYbh]Z]\_Uhcf'j Yfk YbXYhž'k cXi fW\'Yg'h\YcfYh]gW\'a Ò[ `]W\']ghž XifW\'9]b[ UVY'bYi Yf'6Ub\_\_UfhYbbi a a Yfb'a Y\fZUW\'ni 'k À\`Ybi bX'XUg'GmghYa 'ni 'a Ub]di `]YfYb"

9g'k]fX'Ub[Ybca a Ybž'XUgg'Y]bnY`bY'DYfgcbYb'Xi fW\'X]Y
JYfk YbXi b['j cb'V]g'ni 'UW\h'j YfgW\]YXYbYb'6Ub\_\_UfhYb'k À\fYbX
XYg'; fUbX':]bU`']bg[YgUa h'%\* \$'Gh]a a Yb'UV[YVYb'\_ObbhYb"
A Ufh]b'; fYYb'769ž'8]fY\_hcf'XYg'9i fcj ]g]cb'Gcb['7cbhYghž
Yf\_`ÀfhYž'XUgg' U``Y'[Ø`h][Yb'Gh]a a Yb'Ui Z[YnY]W\bYh'i bX'j cb
Y]bYa'i bUV\Àb[][Yb'7ca d`]UbWY!A cb]hcf'ØVYfdfØZh'k i fXYb"
8 YbbcW\'ZcfXYfhY'F HJ 9'Y]bY'XYhU]``]YfhY'5i ZgW\`ØggY'i b['XYf
HY`Yj chY'i bX'Yf\]Y`h'=bZcfa Uh]cbYb'ØVYf'X]Y'5bnU\`'XYf'5bfi ZYž
GA G'i bX'Cb`]bY!Gh]a a Yb'k À\fYbX'XYg'; fUbX':]bU`g"

## < YfUi gZcfXYfi b[Yb XYg K YhhVYk YfVg

8]Y'U\_hi Y``Y'G]hi Uh]cb']gh'Y]b'k Y]hYfYf'6Yk Y]g'ZØf'X]Y
<YfUi gZcfXYfi b[Ybž'XYbYb'g]W\XYf'9i fcj ]g]cb'Gcb['7cbhYgh
[Y[YbØVYfg]Y\h''8]Y'b]YXYf'ÀbX]gW\Yb'Fi bXZi b\_UbghU`hYb
5JFCHFCG'i bX'BDC'Ài »YfhYb'YVYbZU``g'6YXYb\_Yb'\]bg]W\h']W\
dc`]h]gW\Yf'9]bZØggY'Ui Z'XYb'K YhhVYk YfV''5i W\X]Y': U]fbYgg'XYg
5Vgh]a a i b[ggmghYa gž'XUg'gY]h'gY]bYf'9]bZØ\fi b[']a '\\J\f'%-) \*
gh\AbX]['k Y]hYfYbhk]W\_Y`h'k i fXYž'ghY\h'ni f'8YVUhhY'''
9i fcj ]g]cbUbXZf]YbXg''Wca 'Yf\_`\Afh\Z'XUgg'XUg'U\_hi Y``Y
5Vgh]a a i b[ggmghYa Z'XUg'&\%'' YhUV`]Yfh'k i fXYZ'Y]bY
?ca V]bUh]cb'Ui g'OZZYbh`]W\Ya 'i bX'\s\fmj chi a 'XUfghY``h''8YbbcW\
k]fX'Y]bY'i a ZUggYbXY', VYfdfØZi b['XYg'GmghYa g'U`g'bchk YbX][
YfUW\hYh\Z'i a 'X]Y'\d\hYf'[f]h\Ah'XYg'K YhhVYk YfVg'ni '[Yk \A\f`Y]ghYb''

| 8 Y hU]`g |   |
|-----------|---|
| JcfZU``   | 6Yhfi [                                       |
| I fgUWX Y | KU\`aUb]di`Uh]cbž'ghUUh`]WXY'9]bZiggbU\aY     |
| Cfh       | 6UgY`ž'GW\kY]n                                |
| Ei Y``Yb  | <ul><li>k k k "g\W\ k UYV]g\W\ Y"XY</li></ul> |
|           | <ul><li>YgW]bg][\h"Wca</li></ul>              |

| 8 Y hU]`g |                                     |
|-----------|-------------------------------------|
|           | • k k k "Yi fcj ]g]cbUbXZf]YbXg"Wca |

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