

6UXYb!K ØfhhYa VYf[i bX GW k Y]n. DUfhbYfgW UZh ZØf Ni _i bZh [YghU`hYb°

6UXYb!K ØfhhYa VYf['i bX'X]Y'GW\k Y]n'gh\h_Yb']\fY Ni gUa a YbUfVY]h']b'K]fhgW\UZh'i bX'K]ggYbgW\UZh'a]h'Y]bYf bYi Yb'GhfUhY[]YžX]Y'V]g'&\$&+'i a [YgYhnh'k]fX"



6UXYb!K ØfhhYa VYf[ž8Yi hgWX`UbX`!`K Ug`[Y\h`]b`6UXYb!

K ØfhhYa VYf[iibX`XYf`GW\kY]n3`9]bY`gdUbbYbXY`DUfhbYfgW\UZh

k]fX`ni f`bYi Yb`6fØW_Y`nk]gW\Yb`XYb`FY[]cbYb°

A]b]ghYfdfÀg]XYbh`K]bZf]YX`?fYhgW\a Ubb`Vf]b[h`Zf]gW\Yb`K]bX`]b

X]Y`[fYbnØVYfgW\fY]hYbXY`Ni gUa a YbUfVY]h`ibX`\YVh`X]Y

♣bcj Uh]cbg_fUZh`VY]XYf`FY[]cbYb`\Yfj cf"`8]Y`[Yd`UbhYb

A U»bU\a Yb`]b`K]fhgW\UZhž`K]ggYbgW\UZhiibX`HYW\bc`c[]Y

j YfgdfYW\Ybž`XUgg`X]Y`J YfV]bXi b[`b]W\h'bi f`j Yfh]YZhž`gcbXYfb

Ui W\`bYi `[YghU`hYh'k]fX''` K]f`\UVYb`Y]bY`[Ya Y]bgUa Y

U`Ya Ubb]gW\Y`?i`hi f`ibX`Yi fcdÀ]gW\Y`K YfhYž`X]Y`ibg

j YfV]bXYb Ž`VYhcbh?fYhgW\a Ubbž`k À\fYbX`Yf`X]Y`bYi Y`GW\kY]n!

GhfUhY[]Y`j cfghY``hž`X]Y`U`g`dc`]h]gW\Yf`FU\a Yb`ZØf`X]Y`ni _ØbZh][Y

Ni gUa a YbUfVY]h`X]Ybh"\9]b`6`]W_`Ui Z`XUg`9b[U[Ya Ybh`nY][h

6UXYb!K ØfhhYa VYf['g]Y\h'g]W\'U`g'6fØW_YbVUi Yf'nk]gW\Yb'XYf GW\k Y]n'i bX'XYf'9I ž'k Ug']b'NY]hYb'Ui Z[Y`UXYbYf'dc`]h]gW\Yf 6Yn]Y\i b[Yb'j cb'VYqcbXYfYf'6YXYi hi b[']qh

ш

8]Y:cfhgWkfY]Vib[XYfiGWkKY]nYfiGhfUhY[]YžX]YifgdfØb[`]Wk &\$%+i]bgi@YVYbi[YfiZYbikifXYžiY[hiGWkYfdib_hYi]b
j YfgWk]YXYbYbi6YfY]WkYbiZYghi8Uniinà\iYbiX]YiYb[Y
?ccdYfUh]cbia]hiXYfi9H<in\@f]WkžX]YiJYfbYhnib[ijcbi7ighYfbi]b
XYfi; YgibX\Y]hgk]fhgWkUZhigck]YiXYfi@iZhiibXiFUiaZU\fhi
6YgcbXYfgi\Yfjcfni\YVYbi]ghiX]Yi9iY_hf]Z]n]Yfib[iXYf
<cWkf\Y]bVU\biV]gi&\$&+žX]YiY]bYigWkbYiiYiJYfV]bXib[ijcbi6UgYi
@VYfiGWkUZZ\UigYbiibXi?cbghUbniV]gibUWkiGhi; UiiYb
Yfa\[o][i]WkYbigcii8Uf@VYfi\]bUigik]fXiX]Yi9bhk]W_iib[iY]bYf
K UggYfghcZZk]fhgWkUZhiZcfW]YfhžiX]YiX]YiFY[]cbi:fY]Vif[#6UgYiUig
nYbhfUiYbi?bchYbdib_hidcg]h]cb]Yfhi8]YgYiJcf\UVYbig]bXiHY]i
Y]bYfiVfY]hYbiGhfUhY[]YžiX]YiUiWki8Yac_fUh]YiibXi6@f[YfX]Uic[i]b
XYbi:c_igif@W_hi8Yac_fUh]Y_cbZYfYbnYbia]hiXYai?Ubhcb
5Uf[UiigciiYbiXYbidci]h]gWkYbi5ighUigWkighÀf_Ybii

6UXYb!K ØfhhYa VYf['i bX'X]Y'GWk Y]n. '9]b 8i c'a]h'DchYbn]U`

 $8 c W k Ug VYXYi hYh X Ug _cb_fYh Z f X]Y A YbgW Yb `\] Yfni `UbXY3 6 YgcbXYfg `Ub [Yg]W hg XYf `nU `fY]W Yb `DYbX`Yf z X]Y `hA [`]W X]Y ; fYbnY ` Ø VYfei YfYb "`A]h Y]b Yf '' $$ `_a ``Ub [Yb '; fYbnY i bX Yhk U) + "$$$ `DYbX`Yfb `nk]gW Yb `6 UXYb!K Ø fhhYa VYf['i bX `XYf `GW k Y]n]gh X]Y `B chk Yb X][_Y]h `Z f '_` UfY `5 Vgd f U W Yb `Yj]XYbh "`8]Y `bYi Y Gh f UhY []Y `gc ```Ui W `X]Y `< Yf Ui g Z c f XYfi b [Yb ']a `6 YfY] W DYfgcbYb Z f Y]n Ø [][_Y]h `UXf Y gg]Yf Yb z `X]Y `U`g `n Ybh f U`Yf `Ghc `d Yfgh Y]b Z f X]Y `U Yf `UbX`i b [Yb 'nk]g W Yb `6 Yfb 'i b X `6 f Ø gg Y` [Y`h Yb "`5 b `XYf Ni g Ua a Yb Uf V Y]h 'k]f X `h f chn 'X] Y g Y f `< Yf Ui g Z c f X Y fi b [Yb Z Y f V Yhc b h"] Y `Gh U Uhg Y _f Yh A f : `cf] Ub '< U `Yf `V Yhc b h" }$

8]Y'@U[Y']gh'YXcW\'b]W\h'bif'XifW\'dc`]h]gW\Y'?bUW_dib_hY
[YdfÀ[h"'=a '<]bhYf_cdZ'V`Y]Vh'XUg'GW\Y]hYfb'XYg'`YhnhYb'9I!
FU\aYbUV_caaYbg'a]h'XYf'GW\kY]n']a 'AU]'&\$&%ž'XUg'XYb

: cfhgWkf]hhi]b 'XYb'J Yf\UbX`i b[Yb'`À\a hY"'8YbbcWk'[]Vh'Yg'Ui Wk@]WkhV`]W_Yž'gc'_ÒbbhY'V]g'&\$&* 'cXYf'&\$&+'Y]b 'bYi Yg ?ccdYfUh]cbgUV_ca a Yb'i bhYfnY]WkbYh'k YfXYb"'?fYhgWka Ubb i bX'X]Y'@UbXYgfY[]Yfi b['Yb[U[]YfYb'g]Wk']bhYbg]j ž'i a 'X]Y ; YqdfÀWkY'k]YXYf']b'; Ub['ni 'Vf]b[Yb"

K]ggYbgWX UZh`]WX Y ? ccdYfUh]cbYb i bX 6]`Xi b[gUb[YVchY

9]b'k Y]hYfYg'GhUbXVY]b'XYf'DUfhbYfgW\UZh'g]bX'X]Y'%' \$
VYghY\YbXYb'?ccdYfUh]cbYb'nk]gW\Yb'<cW\gW\i `Ybž'X]Y'b]W\h
bi f'a]h'XYf'GW\k Y]nž'gcbXYfb'Ui W\'a]h'2 ghYffY]W\'i bX
@]YW\hYbghY]b'[YdZY[h'k YfXYb"'8]Y'ZY\`YbXYb'fYW\h`]W\Yb
; fi bX`U[Yb'\UhhYb'X]Y'9]bk YfVi b['j cb'9I!A]hhY`b'V]g`Ub[
YfgW\k Yfhž'XcW\'UV'%"'\Jbi Uf'&\\$\\))'k]fX'X]Y'HY]`bU\a Y'Ub
<cf]ncb'9i fcdY'i bX'k Y]hYfYb'Dfc[fUa a Yb'Yfa Ò[`]W\hž'k Ug
Y]bYb'k Y]hYfYb'GW\i V'ZØf'X]Y': cfgW\i b[gdYfgdY_h]j Yb'XYf
FY[]cb'XUfghY``h"

 $8]Y K]ggYbgWW UZhga]b]ghYf]b DYhfU C gWW ck g_] Vhh & & (VYfY]hg Y]bY 5 Vg]WW hgYf_ Afi b[a]h XYa ? Ubhc b NØf]WW i bhYfnY]WW bYh X]Y X]Y Y]V 9H< NØf]WW a ch]j]Yfh z Y]bY 5 i <math>\Rightarrow$ YbghY Y]b < Y] Vfc bb ni YfÒZZbYb " <]Yf gc Yh Y]b @Yhf! i bX : cfgWW i b[gnYbhfi a ZØf X][]hU Y HfUbgZcfa Uh]cb i bX X]Y YfghYb Dfc ZYggi fYb]a \Rightarrow Uhf & & &)]bg @Y VYb [Yfi ZYb k YfXYb z k Ug X]Y 9fk Ufhi b[Yb Ub Y]bY ni _i bZhgcf]Ybh]YfhY 6] Xi b[ghY][Yfh 5 Y X]YgY A U \(b b U A Yb i bhYfghfY]WW Yb z k]Y k]WW h][X]Y DUfhbYfgWW UZh nk]gWW Yb 6UXYb! K ØfhHYa VYf[i bX XYf GWW k Y]n ZØf X]Y Ni _i bZh VY]XYf FY[]cbYb]gh"

8 Y hU]`g	
Cfh	6UXYb!K ØfhhYa VYf[ž8Yi hgWX`UbX
EiY``Yb	• k k k "VUXYb!k i YfhhYa VYf["XY
	k k k "`UbXhU[!Vk "XY
	k k k "ghUUhgUbnY][Yf"XY