

I bZÀ``Y'i bX'GW\ÀXYb.'Dc`]nY]a Y`Xi b[Yb Ui g'6UX'<YfgZY`X'i bX'l a [YVi b[

5_hi Y``Y`Dc`]nY]a Y`Xi b[Yb`Ui g`6UX`<YfgZY`X. : U\fnYi [i bZÀ``Y`i bX`GUW\gW\ÀXYb`]b`<Yf]b[Yb'i bX I a [YVi b["'⇒DZcfa]YfYb'G]Y`g]W\`Yhnh°

I bZÀ``Y`]b 6UX < YfgZY`X i bX I a [YVi b[

9]b k Y]hYfYf J cfZU``YfY][bYhY g]WX Ua * 8" GYdhYa VYf * 8\$ ([Y[Yb %' .%) I \f']b 6UX < YfgZY`X" 9]bY (-! * A\f][Y : U\fYf]b Y]bYg GYUh 5`\Ua VfU k c``hY Ub XYf 5 VZU\fh XYf 6 * & ']b X]Y 6Yf`]bYf GhfU» Y UVV]Y[Ybža i gghY * YXcWX j cf']\f'j Yf_Y\fgVYX]b[h Ub\U`hYb" 8]YgY G]hi Uh]cb k i fXY j cb Y]bYf %-! * A\f][Yb : U\fYf]b Y]bYg UbXYfYb D_k * ØVYfgY\YbžX]Y Ui ZXYb GYUh'Ui ZZ\f" <]YfVY] Yb hghUbX Y]b GUWX gWX UXYb j cb Yhk U'() \$\$ '9i fc"

5a [`Y]WXYb HU[ži a '%*.\$) 'I \fž'_Ua 'Yg'ni 'Y]bYa 'k Y]hYfYb I bZU```]b'XYf'< Ui dhghfU» Y']b'Gcf[U"'9]bY'* &! 'À\f][Y': fUi 'dUf_hY]\fYb'J K 'Dc`cž'YXcWX'i bhYf`]YZ']\f'VY]a '5i gZU\fYb'Y]b : U\fZY\`Yfž'XYf'XUg': U\fnYi ['[Y[Yb'Y]bY'< Ui gk UbX'gWX`Yi XYfhY" 8Yf'GUWXgWXUXYb'k i fXY'Ui Z'fi bX')) \$\$'9i fc'[YgWXÀhnh"

 $5a ""GYdhYa VYf'&$&(\check{z}[Y[Yb'$,.$$'I \f\check{z}'k Uf'X]Y'G]hi Uh]cb'Ui ZXYf'?(*']b'<Ui bYhU`'YVYbZU``g'b]Wkh'c\bY"'9]bY''*!'Â\f][Y:U\fYf]b'Y]bYg'A YfWXYg'Ga Ufh'\UhhY'Y]b'i bYfk UfhYhYg <]bXYfb]g.'9]b'<]fgWk'_fYi nhY'd`Òhn`]Wk'X]Y':U\fVU\b"'<math>\pm$ b']\fYa JYfgi Wk \check{z} XYa 'H]Yf'Ui gni k Y]WkYb \check{z} fi hgWkhY'XUg'5i hc']b'XYb GhfU $_{y}$ Yb[fUVYb'i bX'_]ddhY'UbgWk`]Y $_{y}$ YbX'Ui Z'X]Y'GY]hY"; ' \emptyset W_`]WkYfk Y]gY'V`]YV'X]Y':U\fYf]b'bi f'`Y]Wkh'j Yf`Yhnh \check{z} XYf GUWkgWkUXYb'VYhfi ['YXcWk'YhkU', \$\$\$'9i fc"

Ni f'[`Y]WX Yb `NY]h'Ua '' "'GYdhYa VYf'&\$&(\check{z} [Y[Yb '%\$.') 'I \f \check{z} 'k Uf Y]b '* &! 'À\f][Yf': U\fYf'Y]b Yg 'Hc mc hU 'MUf]g']b '< Yf]b[Yb ']a 'F U\a Yb Y]b Yg 'DUf_j cf[Ub[g']bj c`j]Yfh"'6Y]'gY]b Ya 'A Ub Òj Yf'gh]Y» 'Yf [Y[Yb 'Y]b'[YdUf_hYg'5i hc \check{z} 'k Ug'Y]b Yb 'GUWXgWX UXYb'j cb'&) \$\$ 9i fc'ni f': c`[Y'\UhhY"

Ni gUa a YbghÒ» Y i b X VY]bU\Y!?c``]g]cbYb

9]b'k Y]hYfYf'YfbghYf'JcfZU``'YfY][bYhY'g]W\ 'ni f'A]hhU[gnY]h'Ua '' "GYdhYa VYf']b'6UX'<YfgZY`X"'9]b') *! A f][Yf'A Ubb'Ui g'6i f[\Ui b Zi \f'Ui Z'XYf'GhfU» Y' 5b'XYf'<Ui bY 'i bX'_c``]X]YfhY'a]h'Y]bYf &+! A f][Yb'D_k!: U\fYf]b'Ui g'JY``a Ufž'k Y`W\Y'X]Y'JcfZU\fh a]ggUW\hYhY"8]YgYf'Ni gUa a Ybghc» 'j Yfi fgUW\hY'Y]bYb Yf\YV`]W\Yb'GUW\gW\UXYb'j cb'*) \$\$'9i fc"

Ni 'gdÀhYfYf'Ghi bXYž'i a '%-.&) 'l \fž'_Ua 'Y]b'%, !Â\f][Yf A chcffUXZU\fYf']b'XYf'?(*']b'Y]bY'[YZÀ\f`]W\Y'G]hi Uh]cb"'9f'j Yf`cf]b'Y]bYf'?i fj Y'X]Y'?cbhfc``Y'ØVYf'gY]b': U\fnYi ['i bX'dfU``hY']b Y]bYb'6Ui a "'Hfchn'XYf'\YZh][Yb'?c``]g]cb'V`]YV'XYf': U\fYf i bj Yf`Yhnhž'YXcW\YbhghUbX'Y]b'GUW\gW\UXYb'j cb'&) \$\$'9i fc"

 $\label{lem:conditional} K Yb][Y'Ghi bXYb'gdAhYfž'[Y[Yb'&\$.) \$'I \f']b'@lXk][gUi ž [Ya]gW\hY'Y]b'%*!'A\f][Yf'\[YbX`]W\Yf'a]h'Y]bYa'HfU_hcf'i bX$

Ub[Y\\Ab[hYf' 9[[Y 'X]Y'<\YfgZY`X\Yf'GhfU\\\Y''\8\UV\Y]'\V\g\W\\\A\X][h\Y'\Yf nk Y]'\Ua ': \U\\f\U\\\bf\Ub\X'\d\Uf_\Yb\X\Y'5i hcgž'k \Ug'\Y]\b\Y\b\V\Y\U\W\\h`]\W\\\b '\Y\g\W\\\Ahni \b[gk Y]g\Y'\%' "\\$\\$\\$'9i fc'j \Yfi fg\U\W\\h\Y'' \\

8]YgY'l bZÀ``Y'j YfXYi h`]W\Yb'X]Y'6YXYi hi b['j cb'5W\hgUa _Y]h'i bX Jcfg]W\h']a 'GhfU» Ybj Yf_Y\f"'6YgcbXYfg']b'NY]hYbž'k c JYf_Y\fgg]hi Uh]cbYb'i bYfk UfhYh'Y]bhfYhYb'_ÒbbYbž']gh'Yg'k]W\h][žg]W\'XYf'JYfUbhk cfhi b['U`g': U\fnYi [ZØ\fYf'VYk i ggh'ni 'gY]b"

 $9fghY``h'jcb'XYf'Dc`]nY]ghUh]cb'6UX'< YfgZY`Xž'?Y\`"$

8 YhU]`g

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