

HØf_Y]!I f`Ui V k]fX hYi fYf. K UfhY Ui Z ; Y`X!9bh`Ughi b['V`Y]Vh'j Yf[YV`]WX °

I f`Ui V`]b`XYf`HØf_Y]`k]fX`hYi fYf. '±bZ`Uh]cbggcf[Yb`i bXgWk UWXY`@fU`VYY]bZi ggYb`DfY]gY`ZØf`<chY`g`i bX JYfdZY[i b["



HØf_Y]'!'I f`Ui V']b`XYf`HØf_Y]'k]fX`hYi fYfž'i bX`XYf`HfYbX`ni f
DfY]gghY][Yfi b['k]fX'j cfUi gg]W\h`]W\`Ub\U`hYb"'@Ui h`Y]bYa
6Yf]W\h'j cb`XYfk YghYb"XY`]gh`X]Y`\D\ZUh]cb`]a '@UbX`]a '5df]``Ui Z
' +ž- 'i '[YZU``Ybž'k Ug`YXcW\`Y]bYb``Y]W\hYb`FØW_[Ub[']a
J Yf[`Y]W\`ni '' , ž%'i ']a 'A Àfn`XUfghY``h"'Hfchn`X]YgYf``Y]W\hYb
9bhgdUbbi b['V`Y]Vh`XUg`DfY]gb]j YUi 'k Y]hYf\]b`\cW\"'Hci f]ghYb
a ØggYb`a]h`g][b]Z]_Ubh`\O\YfYb`5i g[UVYb`ZØf`I bhYf_i bZh`i bX
J YfdZY[i b['fYW\bYb"

8]Y'hØf_]gW\Y'@]fU'\Uh'ghUf_'Ub'K Yfh'[Y[YbØVYf'XYa'I G!8c``Uf j Yf`cfYbž'k Ug'hY]`k Y]gY'Ui Z'dc`]h]gW\Y'Hi fVi `YbnYbž'k]Y'X]Y : YghbU\a Y'XYg'=ghUbVi `Yf'6Øf[Yfa Y]ghYfg'9_fYa'=a Ua c[`i ž ni fØW_ni ZØ\fYb']gh''8]Yg'\Uh'ni f'J YfhYi Yfi b['j cb'=a dcfhk UfYb

 $[YZ\emptyset \backslash fh'ibX'gca]h'X]Y'?cghYb']a \to `UbX'kY]hYf'Yf \backslash O \backslash h'' \to a \cdot 5df] `gh]Y[Yb'X]Y'DfY]gY']b' < chY`gž'7UZÅg'ibX'FYghUifUbhg'ia 'ZUgh'(&i]a 'JYf[`Y]W\'nia 'Jcf'U\f''@YVYbga]hhY`ibX'U`_c\c`ZfY]Y ; YhfÀb_Y'jYfhYiYfhYb'g]W\'ia'' * i ž'k À\fYbX'X]Y'K c\b_cghYb']b XYf'HØf_Y]'gY]h'5df]``&$&('gc[Uf'ia'+('i'Ub[Ygh]Y[Yb'g]bX''$

FYU_h]cb 'Ui Z'X]Y '=bZ'Uh]cb

I a 'XYf' \pm ZUh]cb'Ybh[Y[Ybni k]f_Ybž'\Uh'X]Y'hØf_]gW\Y NYbhfU'VUb_'XYb'@Y]hn]bg'j cb'(&ž)'ı 'Ui Z'(*ž\$'ı 'Yf\Ò\h''8]Yg nYi [h'j cb'XYa '6YghfYVYbž'Y]bY''Ub[Zf]gh][Y'GhUV]')g]Yfi b['XYf K À\fi b[gdc`]h]_'j cfUbni hfY]VYb'''?i fnZf]gh][Y'9bh`Ughi b[Yb'ZØf Hci f]ghYb'g]bX'YXcW\'b]W\h']b'G]W\h''8Yf'7\YZ'XYf'hØf_]gW\Yb BchYbVUb_'k Ufbh'j cf'k Y]hYfYb' \pm 0ZUh]cbgf]g]_Yb'i bX'\Uh'XUg'N]Y`Zcfa i ']Yfhž'Y]bY'À\f']W\Y' \pm 0ZUh]cb'j cb'&('i 'V]g'9bXY'&\$&)'ni YffY]W\Yb"

Hfchn'X]YgYf'<YfUi gZcfXYfi b[Yb'V`Y]Vh'X]Y'HØf_Y]'ZØf'FY]gYbXY k Y]hYf\]b'Y]b'VY`]YVhYg'N]Y`"'6YgcbXYfg'Ub'XYf'Ÿ[À]g'i bX'XYf F]j]YfU'n]Y\h'X]Y'X]Y'FY[]cb'I f`Ui VYf'Ub'i bX'V]YhYh'bYVYb'`Ub[Yb GUbXghfÀbXYb'Ui W\'\Yfj cffU[YbXY'6UXYVYX]b[i b[Yb"'8]Y Hci f]ga i gVfUbW\Y'\Uh'nk Uf'a]h'\c\Yb'DfY]gYb'ni '_Àa dZYbž YXcW\'V`Y]VYb'X]Y'6i W\i b[Yb'Ui g'8Yi hgW\`UbX'Ui Z'\c\Ya B]j YUi ž'k]Y']bY'5bU`mgY'j cb'fY]gYfYdcfhYf"XY'nY][h"

$DfY]gYbhk]W_ib[ZØf&$&($

 $: \varnothing f^*\&\$\&(`k]fX`Y]b`kY]hYfYf^*5bgh]Y[`XYf^*&ZUh]cbgfUhY`]b`XYf\\ H\varnothing f_Y]`dfc[bcgh]n]Yfhž'kUg`YfbYih`ni``\`O\YfYb`DfY]gYb`]b`<chY`gibX`FYghUifUbhg`Z\@\fYb`_ObbhY''`8Yf^8ifW\gW\b]hhgdfY]g`Z\@f< \\ chY`n]aaYf``]Y[h`VYfY]hg`Yhnh`VY]`%', `9ifc`]b`*ghUbVi``ibX`%%$9ifc`]b`5bhU`mUž`kUg''+ž(`i`aY\f`U`g`]a`*J\f`&$&&`UigaUW\h''Hfchn`X]YgYf`DfY]gghY][Yfib[Yb`nY][Yb`g]W\XYihgW\Y`If`UiVYf\YfY]hž`ni`fY]gYb.`G]Y`bY][Yb`XUniž`k\A\fYbX`]\fYg`If`UiVg`Y\Yfni`gdUfYbž`ghUhh`[Ubn`UiZ`FY]gYb`ni`jYfn]W\hYb''$

8]Y'K À\fi b[gYbhk]W_\`i b['V]YhYh'FY]gYbXYb'Ui g'9i fc!@\bXYfb JcfhY]\Y\Z\U']\fY'K \A\fi b['Ub'?Ui Z_fU\Zh'[Yk]\bbh\"'6\Ygcb\X\Yfg'\Y]

| 8 YhU]`g | |
|----------|---|
| Cfh | HØf_Y] |
| EiY``Yb | • k k k "XYfk YghYb"XY |
| | k k k "fY]gYfYdcfhYf"XY |

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