5ggYgga Ybh

5ggYgga YbhHUg_g

5ggYgga Ybh'hUg_	K Y][\h	8i Y [.] 8UhY	Gh XYbh@YUfb]b[Ci hWca Yg 5ggYggYX
8 fUZn'9ggUm'D`Ub'Gi a a Ufmi	&\$ı	UZhYf`gYj Yb`f⊩Ł'XUm	

GhJfhXUhY. Bch5dd`]WUV`Y

@Yb[h\."&\$\$\$"k cfXg

8YHJ]`g.

%cZ&T:]bU``YggUmg`&\$\$\$`k cfXg"`K f]hhYb`ZYYXVUW_`k]h\]b`%\$`k cf_]b[`XUmg"

Gi Va]gg]cb bch/g. F YZYf hc ci f A ccX`Y dU[Y"

 $\label{thm:continuous} \begin{tabular}{ll} Hi fb]h]b gYhh]b[. H\]g Ugg][ba Ybh]g gi Va]hhYX hAfci [\Thi fb]h]b UbX ghi XYbhg Wub gYY Hi fb]h]b g]a] Uf]hm fYdcfhg"$

FYgci fW/g

DfYgWf]VYX F Ygci fWYg

 $F \ Ygci \ fWYg'k \] ```VY'`UXXYX'hc'h\Y'`A \ ccX`Y'`dU[\ Y''``GYY'``Y[\ Ubhc'' \]$

FYWca a YbXYX FYgci fWfg

 $H\setminus g'k$]``VY'UXXYX'fc'f\Y''A ccX`Y'dU[Y"'GYY'`Y[Ubfc"

7 ci fgY 9j U'i Uh]cb UbX 8 Yj Y'cda Ybh

"Hk c cdhlcbu" gya]bufg ufy c zzyfyx hc gh Xybhg Xi f]b['hk Y hy fa 'Uhu'h]a Y hk Uhigi]hg 'U` 'gh Xybhg 'UbX hk Y 7 cbj Ybcf" \dia zcfa U` 'zyyXvuw_']g 'gci [\hizfca 'gh Xybhg 'Ug 'hc i gyz 'bygg c z hk Y 'fyux]b[gz hk Y 'Uggygga Ybhg UbX k \Uhiwci 'X 'VY 'a cx]z]yx "hc 'Yb\UbW' [fyuh'y f'gh Xybh'Yufb]b["'Gh Xybhg 'k]` 'Wca d 'YhY 'Ub 'Yj U'i Uhjcb 'zcfa 'Uhih Y 'YbX 'c z hk Y ']bh'y fbg\]d" 'H\Y 'Wcbj Ybcf']g 'U`gc 'cdYb 'hc ''fywY]j]b['' zyyXvuw_ Xi f]b['hk Y 'hy fa " A m9 I dYf]ybw' 'zyyXvuw_']g 'j U`i YX 'UbX 'i gYX 'hc]a dfcj Y 'hk Y gh XYbhYI dYf]ybw'"

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

Hi fb]h]b Gi Va]gg]cb

⊋mci YbWci bhYf'U'dfcV`Ya 'k \Yb'UhYa dhJb['hc'gi Va]hmci f'Ugg][ba Ybhh\fci [\'Hi fb]hJbž'd`YUgY hY`Yd\cbY'9| hYfbU`'Gi ddcfhcb'-',) '' ' ' %cf'Ya U]`'h\Ya 'cb'Y! hYfbU`hYhgi ddcfh4 i bgk "YXi "Ui "''Gi ddcfh\ci fg'UfY', .\$\$Ua '-',\$\$.\$\$da 'cb'k YY_XUmg'UbX'-.\$\$Ua '-').\$\$da 'cb'k YY_YbXg'fl *) 'XUmg'U'mYUfŁ'''⊋mci UfY'i bUV'Y'hc'gi Va]hmci f'Ugg][ba YbhXi Y'hc'U'ZJi `hk]h\'Hi fb]hJb'mci 'a UmUdd`mZcf'Ub'Y! hYbg]cbž'Vi hmci a i ghfYhJ]b'mci f'hJW_Yhbi a VYf'Zfca '9! hYfbU`'Gi ddcfhfU`cb['k]h\'Ubmch\Yf'fY`Yj UbhXcW a YbhgŁ'hc

5 WUXYa]W<cbYghmUbX D`U[]Uf]ga

D`U[]Uf]ga `]g`i g]b['h\Y`k cfXg`cf`]XYUg`cZch\Yfg`UbX'dfYgYbh]b['h\Ya 'Ug`mci f`ck b"'=h\Wb'hU_Y`a Ubm Zcfa qžZfca 'XY`]VYfUhY'W\YUh|b['hc`UWW]XYbhU`mWcdm]b['Zfca 'U'gci fW'k]h\ci h'UW_bck 'YX[Ya Ybh'

IBGK '[fci dg'd'U[]Uf]ga ']bhc'h\Y'Zc``ck]b['WUhY[cf]Yg.

7 cdm]b[.'i g]b['h\Y'gUa Y'cf'] Yfmg]a]`Uf'k cfXg'hc'h\Y'cf][]bU`h\I hcf']XYU'k]h\ci hUW_bck `YX[]b['h\Y gci fW'cf'i g]b['ei chUh]cb'a Uf_g"'H\]g'U'gc'Udd`]Yg'hc']a U[Ygž'Ufh'UbX'XYg][b'dfc'YWgž'Ug'k Y``'Ug dfYgYbhUh]cbg'k \YfY'gca YcbY'dfYgYbhg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci h'WfYX]h'

⇒ Uddfcdf]UhY 'dUfUd\fUg]b[...7\Ub[]b['U'ZYk 'k cfXg'UbX'd\fUgYg'k \]'Y 'a cghmfYhJ]b]b['h\Y'cf][]bU` ghfi Wh fY 'UbX#cf'dfc[fYgg]cb'cZ]XYUg'cZh\Y'cf][]bU'žUbX']bZcfa Uh]cb'k]h\ci hUW_bck `YX[Ya Ybh'H\]g'U`gc Udd`]Yg']b'dfYgYbhUh]cbg'k \YfY'gca YcbY'dUfUd\fUgYg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci hWfYX]hUbX'hc d]YW]b['hc[Yh\Yf'ei chYg'UbX'dUfUd\fUgYg']bhc'U'bYk 'k \c`Yžk]h\ci hUddfcdf]UhY'fYZYfYbW]b["

7 c``i g]cb. 'k cf_jb['k]h\ 'ch\ Yfg'Vi h'dUgg]b['cZZh\ Y 'k cf_'Ug'U'dYfgcb'g']bX]j]Xi U``k cf_"'7 c``i g]cb'U`gc]bWi XYg'dfcj]X]b['mci f'k cf_'hc'Ubch\ Yf'ghi XYbhVYZcfY'h\ Y 'Xi Y 'XUhYzcf'Zcf'h\ Y' di fdcgY'cZh\ Ya d`U[]Uf]g]b['Uh'Ubmh]a Yz'dUm]b['Ubch\ Yf'dYfgcb'hc'dYfZcfa 'Ub'UWUXYa]WhUg_z'ghYU']b['cf'UWei]f]b[Ubch\ Yf'dYfgcb'g' UWUXYa]Wk cf_'UbX'Wcdm]b[']hz'cZYf]b['hc'Wca d`YhY'Ubch\ Yf'dYfgcb'g' k cf_'cf'gYY_]b[dUma YbhZcf'Wca d`Yh]b['UWUXYa]Wk cf_"

±bUddfcdf]UhY`W]hUh]cb.`7]h]b[ˈgci fW/gˈk \]WX`\Uj Y`bchVYYb`fYUXžk]h\ci hUW_bck`YX[]b[ˈh\Y`″gYWcbXUfm″gci fW/Zfca ik \]WX`_bck`YX[Y`cZh\Ya`\UgʻVYYb`cVhU]bYX"

8 i d`]\WUh]cb`ffgY`Zd`U[]\Uf]ga "Ł`gi Va]\h]b[`mci f`ck b`k cf_ž]b`k \c`Y`cf`]b`dUfhžk \YfY`]h\Ug`dfYj]ci g`m VYYb`dfYdUfYX`cf`gi Va]\hYX`Zcf`Ubch\Yf`UggYgga Ybhcf\Wci fgY`UhI BGK `cf`Ubch\Yf`i b]j Yfg]\m'

7 cffYWhfYZYfYbWb[dfUWhWyg.

- DUfUd\fUq]b[žgi a a Uf]q]b[žYggUmk f]h]b['UbX'h]a Y'a UbU[Ya Ybh
- 5ddfcdf]UhY'i gY'cZUbX'Uhff]Vi h]cb'Zcf'U'fUb[Y'cZa UhYf]U`g']bWi X]b['hYl hž']a U[Ygž'Zcfa i `UY'UbX WbWYdhg"

±0X]j]Xi U``Ugg]ghUbWr`]g`Uj U]`UV`Y`cb`fYei YghZfca `H\Y`@YUfb]b[`7 YbhY`f\hd.#k k k "`Wi bgk "YXi "Ui #£" Ghi XYbhg`UfY`U`gc`fYa]bXYX`h\UhWUfYZ ``h]a Y`a UbU[Ya Ybh']g`Ub`]a dcfhUbhdUfhcZghi XmUbX`cbY`cZh\Y]XYbh]Z]YX`WUi gYg`cZd`U[]Uf]ga `]g`dccf`h]a Y`a UbU[Ya Ybh'`Ghi XYbhg`g\ci `X`U``ck `gi Z]W]Ybh'h]a Y`Zcf fYgYUfW\z`XfUZh]b[`UbX`dfcdYf`fYZYfYbW]b[`cZgci fWg`]b`dfYdUf]b[`U```UggYgga Ybh']hYa g"

IBGK @]VfUfmU`gc`\Ugʻh\Y`9@&9`hcc``UjU]`UV`Y`hc`Ugg]ghmci`k]h\`mcif`ghiXmUhIBGK"`9@&9`]g XYg][bYX`hc`]bHcXi WY`bYk`ghiXYbhg`hc`ghiXm]b[`UhIBGK`Vih]hWUb`U`gc`VY`U`[fYUhfYZfYg\Yf`Xif]b[`mcif

5 WUXYa]W = b Zcfa Uh cb

: cf'YggYbhJU`'gh XYbh']bZcfa UhJcb'fY`UhJb['hc.

- fYei Yghg 'Zcf'Yl hYbg]cb/
- `UhY`gi Va]gg]cbg`[i]XY`]bYg/
- fYj]Yk 'cZa Uf_g/
- I BGK '< YU'h\ 'UbX'GUZYhm'dc`]\\\Yg/
- YI Ua]bUhcb dfcWXi fYg/
- qdYWJU``Wcbq]XYfUHjcb`]b`H\Y`Yj YbhcZ]``bYgg`cf`a]gUXj Ybh fY/
- gh XYbhYei]mUbX X]gUV]`]m/
- UbX'ch\Yf'YggYbhJU`'UWUXYa]W]bZcfa UhJcbž'gYY

\hdg.#k k k "Ufhg"i bgk "YXi "Ui #W ffYbhgh XYbhg#UWJXYa]W]bZcfa Uh]cb#dfchcWc`g![i]XY`]bYg#

.

⇒a U[Y'7fYX]h

GmbYf[]Yg^]b^GcibX^&\$%*

7F = 7CG

7F = CG'Dfcj]XYf'7cXY.'\$\$\$-,;

5W_bck `YX[Ya YbhcZ7ci blfm

 $K_{Y'UW\underline{D}bck,YX[Y'h,Y'6YXY[U''dYcd'Y'k \c'UfY'h,Y'hfUX]h]cbU''W ghcX]Ubg'cZh,Y''UbXg'cb'k \] WX'I_BGK_{Ybg]b[hcb'WJa_di_q']q''cWJhYX'''$