

ARTS1032

HY''@hYfUhifY''@UVcfUhcfm'Kf]h]b[''6YmcbX''@]a]hg

GYa YghYf'Hk c''#'&\$%

7ci fgY'Cj Yfj]Yk

GhJZZ7cbhJWh8YhJ]`g`

7cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`]hm	@cWUhjcb	D\cbY
>i`]Ub`A i fd\Yh	^aifd\Yh4ibgk "YXi"Ui	Hi YgXUm'‰l ‰	K YVghYf [*] &(*7	I)()&%

'Hi hcfg'

B Ua Y	9a U]`	5j U]`UV]`]lm	@cWUh]cb	D\cbY
A YHHY'>U_cVgYb	a "1_cVgYb4 i bgk "YXi "Ui		Fcca '&' ‱ FcVYfh KYVghYf	-',)*\$%*
A YYfU [.] 5h_]bgcb	gUa 4 i bgk "YXi "Ui			
9`]nUVYh\	Y"_]b[4 i bgk "YXi "Ui			

GW.cc~7cbhJWh~abZcfa Uhlcb

Fcca " %&ž~Yj Y~" FcVYfhK YVghYf~6i]X]b[

D\cbY. f\$&Ł'-',) '(,) *

9a U]`. 'gUa 4 i bgk "YXi "Ui

K YVq]hY.:\htdg.##qUa "Ufhq"i bqk "YXi "Ui_

 $\label{thm:constraint} $$HY'GWKcc``cZhY'5flg'UbX'AYX]U'kci`X``]_Y'hc'FYgdYWZI``m5W_bck`YX[Y'h\Y'HfUX]l]cbU``7ighcX]Ubgžh\Y'6YXY[U``fPYbg]b[hcb'WJadigŁZ'; UX][U``fP]hmUbX'5fh/'8Yg][b'7UadigYgŁ'UbX'h\Y'B[ibbUkU`dYcd'Y'fbighfU`]Ub'8YZYbWY': cfWY'5WJXYam]b'7UbVYffUŁ'cZh\Y``UbXg'k\YfY'YUW\'WJadig'cZIBGK']g`cWJhYX''$

5 h Y b X U b W F Y e i] f Y a Y b h g

5 'ghi XYbh']g'Yl dYWYX'hc'UhhYbX'U```WUgg'WcbhUWi\ci fg'Zcf'U'ZJWY!hc!ZJWY'fl &: Ł'cf'V`YbXYX'Wci fgY'UbX Wca d'YhY'U```UWYj]h'Yg'Zcf'U'V'YbXYX'cf'Z ``mcb`]bY'Wci fgY"

5 'ghi XYbhik \c'Uff]j Yg'a cfY'h\Ub'%) 'a]bi hYg'`UhY'a UmVY'dYbU`]gYX'Zcf'bcb! UrhYbXUbWY"'-Zgi W\'U'dYbU`hm]g']a dcgYXž'h\Y'ghi XYbha i gh'VY']bZcfa YX'j YfVU``mUh'h\Y'YbX'cZWUgg'UbX'UXj]gYX']b'k f]h]b['k]h\]b'&(\ci fq"

⊋Uʻghi XYbhYl dYf]YbWgʻ]``bYggža]gUXj Ybhi fYʻcfʻch\YfʻcVW ffYbW h\Una U_YgʻUVgYbWʻZfca ʻU WUgg#UWlj]hmi bUj c]XUV`YžʻcfʻYl dYWgʻhcʻVYʻUVgYbhZfca ʻUʻZcfh\Wca]b[ˈWUgg#UWlj]hmž'h\Ymg\ci `XʻgYY_ dYfa]gg]cbʻZfca ʻh\Yʻ7 ci fgYʻ5i h\cf]hmžʻUbX`k\YfY`Udd`]WUV`Yž'h\Y]fʻfYei Yghg\ci `XʻVY`UWWca dUb]YX`VmUb cf[[]bU``cf`WffhZ]XX`WcdmcZU`a YX]WU``WYfhZ]WUhY`cf`ch\Yf`Zcfa `cZUddfcdf]UhY`Yj]XYbWY"

5 '7 ci fgY '5 i h\cf]ma UmYl W gY 'U'gh XYbhZca 'WUggYg'cf'UWjj]hjYg'Zcf'i d'hc'cbY'a cbh\" < ck Yj Yfz'h\Ym a UmUgg][b'UXX]hjcbU``UbX#cf'U'hYfbUhjj Y'hUg_g'hc'Ybgi fY 'Wa d']UbW\" '5 '7 ci fgY '5 i h\cf]miWcbg]XYf]b['h\Y [fUbh]b['cZUVgYbW' a i ghVY 'gUhjgZ]YX 'U'gh XYbhk]```ghj```VY 'UV'Y 'hc'a YYhh\Y 'Wci fgY'g'`YUfb]b['ci h\can Yg UbX#cf'j c`i a Y'cZ`YUfb]b["'5 'gh XYbhgYY_]b['Uddfcj U``hc 'VY 'UVgYbhZcf'a cfY 'h\Ub'cbY'a cbh\ a i ghUdd`m

]b'k f]h]b['hc'h\Y'8YUb'UbX'dfcj]XY'U```cf][]bU``cf'WYfh]Z[YX'gi ddcfh]b['XcW a YbhUh]cb"

: cfa cfY`]bZcfa Uhjcb`UVci hh\Y`UhhYbXUbWY`dfchcWc`g`]b`h\Y`: UW\`hmcZ5fhg`UbX`GcVJU` GVJYbWYg.`\hhdg.#k k k "Ufhg"i bgk "YXi "Ui #W ffYbHghi XYbhg#UWUXYa]W]bZcfa Uhjcb#dfchcWc`g![i]XY`]bYg#

5 WUXYa]W≢bZcfa Uh]cb

: cf`YggYbhJU``ghi XYbh`]bZcfa UhJcb`fY`UhJb['hc.`fYei Yghg`Zcf`YI hYbg]cb/fYj]Yk 'cZa Uf_g/cWW dUhJcbU``\YU`h\ UbX`gUZYhm/YI Ua]bUhJcb`dfcWYXi fYg/gdYWJU``Wcbg]XYfUhJcb`]b`h\Y`Yj YbhcZ]``bYgg`cf`a]gUXj Ybhi fY/

ghi XYbhYei]hmUbX`X]gUV]`]hm'UbX`ch\Yf`YggYbhJU``UWUXYa]W]bZcfa Uh]cbž qYY`\hdq.#k k k "Ufhq"i bqk "YXi "Ui #W ffYbhqhi XYbhq#UWUXYa]W]bZcfa Uh]cb#dfchcWc`q![i]XY`]bYq#

7ci fgY 8YHJ] g

7 fYX]hDc]bhg * *

Gi a a UfmcZh\Y 7ci fgY

H\]g`]bffcXi WcfmWci fgY`W.U``Yb[Yg`mci 'lc'h\]b_'UVci hk f]h]b[`Ug`Yl dYf]a YbhU`žk cfX!Vi]`X]b[ž UXj Ybhi fci gž'W.U``Yb[]b[žfUX]\W]žUbX`Yj Yb`XUb[Yfci gž'UbX'lc'k f]hY`Ug'h\ci [\']h\Wb`W.Ub[Y'h\Y'k Um h\]b[g`UfY"'=hhYUW.Yg'h\Uh`]hYfUhi fY`\Ug`VYYb'h\Y'Yb[]bY!fcca 'cZa UbmcZ\]ghcfmg'a cghXY\\]g]j Y \\Ub\[Yg'hc'gc\]U\Z\W' hi fU'ž]XYc'c[]\W]\Z'UbX`VY\Uj]ci fU`bcfa g"'8]j]XYX`]bhc'Zci f'df]a Ufma cXi `Yg'—I hcd]Ub'GdYW`Uh]cbZ'H\Y'I f[Yb\mcZBck Z'6YmcbX': cfa 'UbX': cfa `YggbYggZ'F\Yhcf]\\g'cZH\Y'=b\i a Ub—']hYl dcgYg'mci 'hc'gca Y'cZh\Y'a cghYl \\]hjb[`UbX'i b\\cbjYbh]cbU`k f]h]b[`]b`'9b[`]g\Z'UbX'Yei]dg'mci 'k]h\gca Y'cZh\Y'g_]``g'bY\\ggUfmhc'fYg]ghh\Y'W`hi fU``\\cbZfa]h]Yg'h\UhXYUXYb'h\Y'a]bX"'HfYUh]b[``]hYfUhi fY Ug'dfc\W'ggZ']bhYfj Ybh]cbZ'UbX`Yl dYf]a YbhZ'h\Y'\\chi fgY'Ug_g'mci 'hc'gYY'k f]h]b[`Ug'U``]ZY`cb['YXi \Wh]cb']b\ck '! hc'i gY'GUa i Y``6Y\\Y\ffid\G\GY'! hc'ZJ)`\Y\ff'

.

5 hh Y WcbWi glcb cZh lg Wci fgY h Y gh XYbhk] ` VY UV Y hc

%" h\]b_`UbX`k f]hY`UVci h``]hYfUhi fY`]b`]hg`gcW]U``WcbhYI hg &" h\]b_`UbX`k f]hY`UVci h``]hYfUhi fY`Ug`Ub`cb[c]b[`dfcWYgg ' " fYWc[b]gY`UbX`X]gW gg`h\Y``cb[`hfUX]h]cb`cZYI dYf]a YbhUh]cb`]b`9b[`]g\``]hYfUhi fY` (" dUfh]W]dUhY`]b`h\Y`YI dYf]a YbhU``dfc^YWhcZ`]hYfUfmdfcXi Wh]cb`

HYUW]b['GhfUhY[]Yg'

H\]g:Wci fgY:k]``VY:HJi [\hiVm%I:%"):\f:`YWh fY:`UbX:%I:%"):\f:h hcf]U``dYf:kYY_'UbX:k]``XYd`cm@A G"

5ggYgga Ybh

D`YUgY`VY`Uk UfY`h\Uh5@UggYgga YbhHUg_g`UfY`fYei]fYX`Wti fgY`Wta dcbYbhg`f\i fX`Y`Wta dcbYbhg\!'`Mci A I GH`UhhYa dh`YUW\`hUg_']b`cfXYf`hc`dUgg`h\Y`Wti fgY'': U]`i fY`hc`Wta d`YhY`UbmcZh\YgY`hUg_g`k]``fYgi `h]b U`ZU]`i fY`cZh\Y`Ybh]fY`Wti fgYžYj Yb`]Zmci f`fYgi `hg`]b`h\Y`ch\Yf`hk c`hUg_g`a][\h'UXX`i d`hc`U'bi a Yf]WU` dUgg]b[`[fUXY"

#i]g'U'gc'U'fYei]fYa YbhcZh\Y'Wci fgY'h\Uhmci 'UhhYbX'U```WUggYgž``YWi fYg'UbX'hi hcf]U'g'': U]i fY'hc'UhhYbX, \$i 'cZU```WUggYg'k]``fYgi 'hi]b'U'ZU]i fY'cZh\Y'Wci fgYži b`Ygg'mci '\Uj Y'a UXY'X]fYWiUffUb[Ya Ybhg'k]h\h\Y'7ci fgY'5Xa]b]ghfUhcf'UbX#cf'GdYWJU``7cbg]XYfUh]cb''`

 $\label{eq:continuity} D`YUgY`VY`Uk~UfY`fh`Ufik~Y`dfYZYf`fh`Y`i~gY`cZfh`Y`7~]WU[~c`A~Ubi~U``cZGfm`Yž`%+fh``YX]f]cbž`Zcf`U```gfm`Y`UbX~fYZYfYbW]b[~ia~UffYfg"$

\hd.#kkk"W\]WU[caUbiU`cZghm`Y"cf[#cc`gSW]hUh]cb[i]XY#W]hUh]cb![i]XY!%"\ha``

K Y`U`gc``]_Y`hc`gYY`U`ghfcb[`]bXYdYbXYbhjc]WY`]b`U```k f]hhYb`hUg_g"`: ★DX`WcbZ]XYbWY`]b`mci f`ck b`j]Yk g UbX`^\X[Ya Ybhqžk \]`Y`hYqh]b[`h\Ya `U[U]bqhh\Y`]XYUq`cZch\Yf`Wf]h]Wq`UbX`h\]b_Yfq"

5ggYgga Ybh'HUg_g'

5ggYgga Ybh'tUg_	K Y][\h	8iY'8UHY	Gh XYbh@YUfb]b[Ci hWca Ygʻ5ggYggYX
H\Y`K f]h]b[`@UV`	')	\$) #%\$#&\$% `\$' .) * `DA	&ž(
@hYfUfmiYl dYf]a Ybhgʻ	')	%\$#\$-#&\$% `\$' .), `DA	% <u>*</u> &. <u>Z</u>
:]bU``YI Ua `	' \$ı	%) #%\$#&\$% `\$\$\$`DA	%ž&Ž

5ggYgga Ybh8YhJ]`g

5ggYgga Ybh% H\YK f]h]b[@UV

Ghufh Xuhy.

@Yb[h\.'&\$\$\$'k cfXg'dYf'gh XYbh

8 YHJ]`g. 'H\Y`k f]h]b[``UV`]g`U`g\W\Zc`XYX`UggYgga Ybhik]h\`hk c`\\can dcbYbhg`h\Uhigi ddcfhik YY_`m dfYdUfUh]cb"'Ghi XYbhg`k]```gi Va]hk cf_`Zfca 'h\Y]f`k f]h]b['ci fbU`g"'Ghi XYbhg`k]```fY\W\]j Y`]bX]j]Xi U``a Uf_g UbX`\\can a Ybhg''

5XX]h]cbU`XYhU]`g.

F Ya Ya VYf'h\Uhih\]g']g'U'HUg_'h\Uhimci 'k]``VY'k cf_]b['cb'Zcf'a cghcZh\Y'gYa YghYfž'gHUfh]b['YUf'm]b'K YY_&"'9]h\Yf'U`cbY'cf']b'[fci dgž'mci 'a i gha U_Y'k YY_`mdfc[fYggž'Ug'cj YfgYYb'Vmmci f'h hcf''Cb'5i [i gh'%*ž mci f'k cf_']b'dfc[fYgg'k]``VY'Wc``YWfYX'Zcf'dfY`]a]bUfmfYj]Yk 'UbX'Wca a Ybh'

Hi fb]h]b gYh]b[. `H\]g Ugg][ba Ybh]g gi Va]hhYX h\fci [\`Hi fb]h]b UbX gh XYbhg Xc bchgYY Hi fb]h]b g]a]`Uf]hmfYdcfhg"

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

Gh XYbhg UfY Yl dYWYX hc di hh\Y]f bUa Yg UbX gh XYbhbi a VYfg cb Yj YfmdU[Y cZh\Y]f Ugg][ba Ybhg"

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

#mci YbWci bhYf'U'dfcV'Ya k \Yb'UhYa dhJo['hc'gi Va]hmci f'Ugg][ba Ybhh\fci [\'Hi fb]h]bž'd'YUgY
hY'Yd\cbY'9| hYfbU'Gi ddcfhcb'-',) "''' %cf'Ya U]'h\Ya 'cb'<u>Yl hYfbU'hY'hgi ddcfh4 i bgk "YXi "Ui"</u>"'Gi ddcfh
\ci fg'UfY', .\$\$Ua '-'%\$.\$\$da 'cb'k YY_XUmg'UbX'-.\$\$Ua '-').\$\$da 'cb'k YY_YbXg'fl *) 'XUmg'U'mYUft'''#mci
UfY'i bUV'Y'hc'gi Va]hmci f'Ugg][ba YbhXi Y'hc'U'ZJi 'hk]h\'Hi fb]h]b'mci 'a Um'Udd'mZcf'Ub'Yl hYbg]cbž'Vi hmci
a i ghfYhJ]b'mci f'h]W_Yhbi a VYf'Zfca '9| hYfbU''Gi ddcfhfU'cb['k]h\'Ubmch\Yf'fY'Yj UbhXcW'a Ybhgt'hc
]bWi XY'Ug'Yj]XYbWY'hc'gi ddcfhmci f'Yl hYbg]cb'Udd']WUh]cb'''#mci 'Ya U]''9| hYfbU''Gi ddcfhmci 'k]''
Ui hca UhJWJ'`mfYWY']j Y'U'HJW_Yhbi a VYfž'Vi h]Zmci 'hY'Yd\cbY'mci 'k]'''bYYX'hc'gdYWJZJWJ'`mUg_'Zcf'cbY''
Hi fb]h]b'U'gc'dfcj]XYg'i dXUhYg'cb'h\Y]f'gmghYa 'gfUh' g'cb'Hk]hYf"

; YbYfU`mž'UggYgga YbhitUg_g'a i ghVY'gi Va]hhYX'Y`YWfcb]WU``mj]U'Y]h\Yf'Hi fb]h]b'cf'U'A ccX`Y Ugg][ba Ybh''=b']bghUbWfg'k \YfY'h\]g']g'bchdcgg]V`Yž']hk]```VY'ghUhYX'cb'mci f'Wci fgY'g'A ccX`Y'g]hY'k]h\U`hYfbUh]j Y'gi Va]gg]cb'XYhU]`g"

@UhY 5ggYgga Ybh'DYbU`h]Yg

Gh XYbhgʻUfYʻfYgdcbg]V`YʻZcfʻh\Yʻgi Va]gg]cbʻcZUggYgga YbhhUg_gʻVmh\YʻfYei]fYX`XUhYgʻUbXʻhJa Yg" 8YdYbX]b[ˈcZh\Y`YI hYbhcZXY`Um]bʻh\Yʻgi Va]gg]cbʻcZUbʻUggYgga YbhhUg_ʻdUghh\Y`Xi Y`XUhY`UbXʻhJa Yž

- K cf_'gi Va]hh'X`%\$`hc`% 'XUmg`UZhYf`h\Y`gh]di `UhYX`XYUX`]bY`k]```VY`UggYggYX`UbX`ZYYXVUW_dfcj]XYX`Vi h'U`a Uf_'cZnYfc`k]```VY`fYWcfXYX"`\Zh\Y`k cf_'k ci `X`\Uj Y`fYWf]j YX`U'dUgg`a Uf_'Vi h'Zcf h\Y``UhYbYgg`UbX`h\Y`k cf_']g`U`Wca di `gcfm'Wci fgY`Wca dcbYbh'f\i fX`Y`fYei]fYa Ybh\z`U'gh XYbhk]``VY`XYYa YX`hc`\Uj Y`a Yhih\Uh'fYei]fYa Ybh\
- K cf_'gi Va]hhYX`&\$`cf`a cfY`XUmg`UZhYf`h\Y`gh]di `UhYX`XYUX`]bY`k]```bchVY`UWWdhYX`Zcf UggYgga YbhUbX`k]```fYWY]j Y`bc`ZYYXVUW_ža Uf_'cf`[fUXY"'=Zh\Y`UggYgga YbhHUg_']g`U`Wca di `gcfm Wca dcbYbhcZh\Y`Wci fgY`U'ghi XYbhik]```fYWY]j Y`Ub`l bgUh]gZJWcfmi: U]``fl : Ł`[fUXY`Ug`U`fYgi `hcZ i bgUh]gZJWcfmidYfZcfa UbWY`]b`Ub`YggYbh]U``Wca dcbYbhcZh\Y`Wci fgY"

H\]g^]bZcfa Uh]cb^]g^U^gc^Uj U]^\$

‰fm

‰ ‰

‰

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"'\lefi\Wb'hU_Y`a Ubm Zcfa gžZfca `XY`]VYfUhY`W\YUh]b['hc`UVW]XYbhU`mWcdm]b['Zfca `U`gci f\W' k]h\ci hUW_bck `YX[Ya Ybh'

IBGK [fcidgdu[]Uf]ga]bhch\YZc``ck]b[WUhY[cf]Yg.

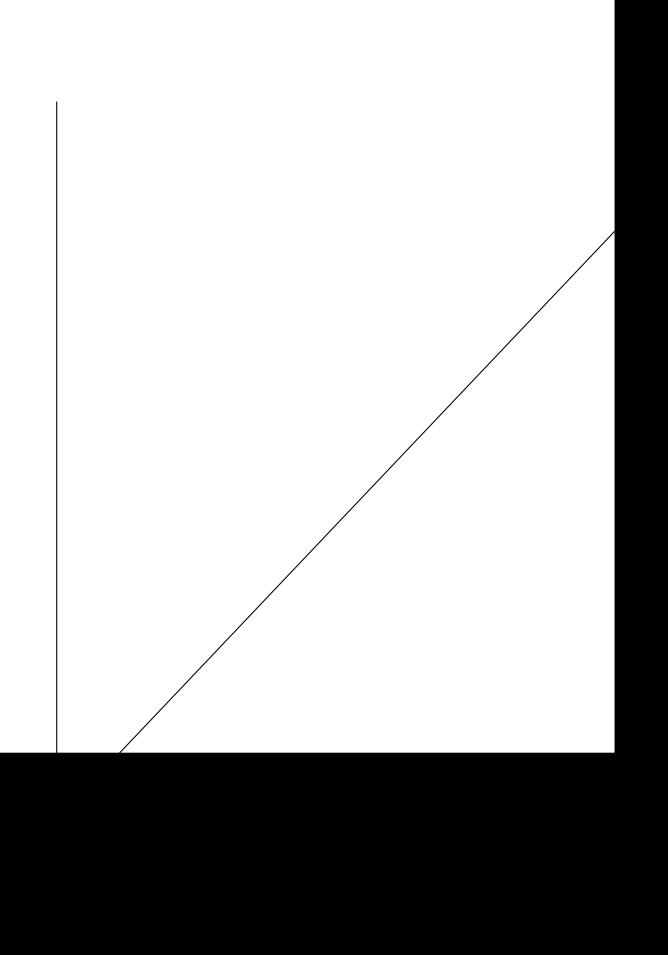
7 cdm]b[.'i g]b['h\Y'gUa Y'cf'j Yfmg]a]`Uf'k cfXg'hc'h\Y'cf][]bU`hYl h'cf']XYU'k]h\ci h'UW_bck `YX[]b['h\Y gci fW'cf'i g]b['ei chUh]cb'a Uf_g"'H\]g'U`gc'Udd`]Yg'hc']a U[Ygž'Ufh'UbX'XYg][b'dfcYWhgž'Ug'k Y``'Ug dfYgYbhUh]cbg'k\YfY'gca YcbY'dfYgYbhg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci h'WfYX]h'

⇒ 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["

 $7c^{i}$ g]cb. 'k cf_]b['k]th. 'cth. Yfg'Vi h'dUgg]b['c\Zth. Y'k cf_'Ug'U'dYfgcb'g']bX]j]Xi U''k cf_"'7c''i g]cb'U'gc

 $i\ bXYfgfUbX`mci\ f`f][\ \ \ bX`fYgdcbg]V]`]fJYg`Ug`U`gfi\ XYbfiUfi]\ BGK$

1		kf]h]b['k]h\ci h`]a]hg'cf'dfYX]WUV`Y'X]fYWh]cbg"'
	Hi H@UV	H\Y`WUgg`k]``WcaY`hc`gYgg]cb`\Uj]b[`fYUXžWcgY`nž h\fYY`Zfh\Yf`aUb]ZYghcg`fKYhU]`g`cb`h\Y`UWfj]]hm g\YYhZcf`kYY_`+Ł"`H\Y`jUf]cig`UWfj]ffYg`k]``VY



FYgci fW/g

DfYgWf]VYX F Ygci fWYg

H\Y'gYh'hYI hg'Zcf'h\]g'Wci fgY'UfY.

6cc_'''G]f'H\ca Ug'A cfYžI hcd]U'f%) %* L'Uh'Vcc_'g\cd'UbX'cb'A ccX'Y

6cc_____fgi `U_@Y; i]bž H\Y 8]gdcggYgYX fl% +(L UhVcc__g\cd

6cc_''''>Ua Yg'6U'Xk]bž"H\Y':]fY'BYI hH]a Y'f% *' Ł 'UhVcc_'g\cd

Ch\Yf```JUf]ci g`Ufh]gh]WUbX`dc`]h]WU`a Ub]ZYghcg.cb`AccX`Y

6cc____; Yfffi XY GHY]bžHYbXYf 6i Hcbg fl/ (Ł 'UhVcc__g\cd/ 'cb A ccX`Y

 $\label{eq:cc_matrix} 6\texttt{cc}_\texttt{''}\texttt{'6}\texttt{fUa''}\texttt{'Ghc}_\texttt{'Yfž'8}\texttt{fUW''}\texttt{'U'f}\% - + \texttt{L'UhVcc}_\texttt{'g}\texttt{'cd''UbX''cb'}\texttt{'bY''}$

.

FYWca a YbXYX FYgci fW/g

K]``]Ua 'A cff]gž'BYk g'Zfca 'Bck \YfY

7\UfYg: ci f]Yfža UhYf]U`g`cb h\Y`d\U`UbghYf]Y

DYfWn6"G\Y``YmžgY`YWYX'dcYag

D'YUgY'ZYY''ZfYY'hc'cZZYf'Wca a YbhUfm'UbX'Wf]hJWJga 'hc'h\Y'7 ci fgY'5i h\cf]lm'UhUbmhJa Y"

⇒a U[Y'7fYX]h

 $H\gray \ cf_[g]b\h\Y\di\ V]WXca\ U]b\gray \ while \ bhfmcZcf][\]b\b\X\ch\Yf\Wc\di\ bhf]Yg\ub\X\uf\Yg\di\ \h\Yf\gray \ h\Y\uf\di\ g\ffg\ff\ff\gray \ h\Y\uf\gray \ h\uf\gray \ h$

7F = 7CG

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