

7ci fgY^{*}Cj Yfj]Yk

GHJZZ:7cbHJWh:8YHJ]`g

7cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`]lm	@cWJhjcb	D\cbY
A UHNYK ?YUfbYg	a "_YUfbYg4 i bgk "YXi "Ui	6mUddc]bha Ybh	,	D`YUgY'Ya U]` ei Yf]Yg"

GWXcc`7cbHJWh ±bZcfa Uh]cb

GWkcc``cZ<iaUb]hJYg'UbX'@Ub[iU[Yg

@c\WJh]cb. G\W\cc``C\Z]\\Y\ž\A\cfj\Yb'6fck\b'6i\]\X]b[\ž'@Yj\Y``&\ž\&),

CdYb]b[<ci fg. A cbXUm! : f]XUmž-Ua '!') da

7ci fgY 8YW] g

7 fYX]hDc]bhg**

Giaa UfmcZh\Y 7ci fgY

H\]g`Wci fgY`]bffcXi WYg`mci 'hc'h\Y`\]ghcf]WJ`žgcWJU``UbX`W`h fU`]a d`]WUhjcbg`cZh\Y`k UghYg`[YbYfUhYX`Vm\i a Ub`gcWJYhm'8]a Ybg]cbg`UbX`hcd]Wg`mci 'ghi Xm]bWi XY.``]ZY`WhWYg`cZa UhYf]U`gž\ck 'k Y`a U_Y_bck `YX[Y`UVci hk UghYžh\Y`gcWJU``]a d`]WUhjcbg`cZk UghY`a UbU[Ya YbhhYW\bc`c[]YgžfY[UWhfi]ggi Yg`UbX h\Y`fWc`cb]gUhjcb`cZh\Y`Z hi fYfNmk UghYg"`Ci f`k UghY`ghfYUa 'YI Ua d`Yg`]bWi XY`d`UghJWgžk UhYf`UbX gYk U[Yž'bi WYUf`a UhYf]U`gž]bXi ghf]U``gYU`Xi a d]b[ž]bhYfbUhjcbU``hfUXY`]b`hcl]Wk UghYgžXca YghJW`UbXZ]``ž UbX`h\Y`WfYUhjcb`cZfki UghY`UbXgfiUbX`WcbhUa]bUhYX`g]hYg"`Mci 'YI d`cfY`gc`i hJcbg`hc'h\Y`[YbYfUhjcb`cZ k UghYg`Vmghi Xmjb['h\Y'dfYWUi hJcbUfmdf]bWJd`YžYbj]fcba YbhU``^f ghJWfž]bhYfbUhjcbU``k UghY`Wcbj YbhJcbg

5ggYgga Ybh

5ggYgga Ybh'HUg_g'

5ggYgga Ybh'hUg_	K Y][\h	8i Y'8UHY	Gh XYbh@YUfb]b[Ci hWca Ygʻ5ggYggYX
9ggUm	')	%*#%\$#&\$&\$`%%\$\$`DA	%ž&Ž Ž)
K UghY': i hi fYg'!'; fci d DfYgYbhUhjcb'	&\$ı	Bch5dd`]WUV`Y	%Z Ž(
K UghY': i hi fYg'!':]bU` F Ydcfhi	()।	&+#%#&\$&\$`%%\$\$`DA	%ž&Ž ž(ž)

5ggYgga Ybh'8YHJ]`g

5 gg)Yggga YYUh16%99glylum

GhUfhXUhY. Bch5dd`]WUV`Y

@Yb[h\.'%)\$\$'k cfXgg

8YHJ]`g.

8Yg][b'mci f'YggUmhcd]Whc'U'ick 'mci 'hc'Uddimh\Y'fYUX]b[g'hc'WcbhYa dcfUfm]ggi Yg'cZk UghY"

5 hm/b XUb WY F Yei]fYa Ybhg

 $\hbox{Ghi XYbhg'UfY'ghfcb[`mYbWci fU[YX'hc'UhhYbX'U```WUggYg'UbX'fYj]Yk ``YWhi fY'fYWcfX]b[g''] } \\$

7ci fgY'GWXYXi `Y

J]Yk 'WUgg'hja YhUV'Y

H]a YtUV`Y

8 UHY	HmdY	7 cbhYbh
K YY_'%'%('GYdhYa VYf'! %'GYdhYa VYf	GYa]bUf	K \Uhi]g'k UghY3'
74 GTUIRA VII		7 ci fgY`cj Yfj]Yk . ˙±bHfcXi Whjcb`hc`k UgHY"`A UHHYf]b["
		FYUX]b[g'Uj U]`UV`Y'j]U'Wti fgY'`Y[Ubhc'g]hY"
	C b`]bY 5 W]j]lm	Cb`]bY'UWfj] Jf]Yg'Uj U]`UV`Y'j]U'H\Y'WtifgY'accX`Y g] Y' "
K YY_'&.'&%GYdhYa VYf'! &)'GYdhYa VYf	GYa]bUf	H\Y`FcUf]b[`%&\$g.`\bjYbh]b[`h\Y`7cbgiaYfž FY]bjYbh]b[``K UghY`fDfcZ"B]Wc`Ug`FUgaiggYbŁ
		FYUX]b[g'UjU]'UV'Y'j]U'WtifgY''Y[Ubhc'g]hY"
	C b`]bY 5 W]j]lm	Cb`]bY`UWNjj]njYg`UjU]`UV`Y`j]U'h\Y`WcifgY`accX`Y g]nY"
K YY_" ."&, "GYdhYa VYf"! &"C WhcVYf	GYa]bUf	K UghYfYXŁ'h\Ycfm
		F YUX]b[g'Uj U]`UV`Y'j]U'Wci fgY'`Y[Ubhc'g]hY"
	C b`]bY 5 W¶j]lm	Cb`]bY`UW¶j]ŊYg`Uj U]`UV`Y`j]U`h\Y`Wci fgY`a ccX`Y g]ŊY"
K YY_'(.') 'C WcVYf'!'- C WcVYf	<ca cf_<="" td="" yk=""><td>DI 6@=7 < C@=85M</td></ca>	DI 6@=7 < C@=85M
	GWfYYb]b[5gmbW.fcbci gʻgYa]bUfʻ!ʻ[Yc[fUd\]YgʻcZi fVUb XYWUm
	C b`]bY 5 W¶j]hm	Cb`]bY`UWNjj]njYg`UjU]`UV`Y`j]U`h\Y`WcifgY`accX`Y g]hY"
K YY_`).`%&`CWfcVYf`!`%* CWfcVYf	GYa]bUf9j YfmXUmik UghYid	Bj\WjkWngUmik UghY`dfUWhj\Wg
	Cb`]bY'5W¶j]hm	Cb`]bY`UW¶j]f]Yg`Uj U]`UV`Y`j]U`f\\Y`Wti fgY`a ccX`Y g]fY"

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

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

Image: Ybwei bhyfu'dfcv'ya k \yb'uhhya dhjb['hc'gi va]hmci f'Ugg][ba Ybhh\fci [\ 'Hi fb]h]bž'd'YUgY

Hy'Yd\cby'9| hy'fbu''Gi ddcfhcb'-',) '' ' ' %cf'Ya U]''h\Ya 'cb'Y! hy'fbu'hy'hgi 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'mYUft"'=Z'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'Y! hy'bg]cbž'Vi hmci
a i ghfYhJ]b'mci f'h]W_Yhbi a VYf'Zfca '9! hy'fbU''Gi ddcfhfU'cb['k]h\ 'Ubmch\Yf'fy'Yj UbhXcW a Ybhgt'hc
]bWi XY'Ug'Yj]XYbW' 'hc'gi ddcfhmci f'Y! hy'bg]cb'Udd']WUh]cb"'=Zmci 'Ya U]''9! hy'fbU''Gi ddcfhmci 'k]'`
Ui hca Uh]WJ'`mfYW']j Y'U'h]W_Yhbi a VYfZ'Vi h]Zmci 'hY'Yd\cbY'mci 'k]``bYYX'hc'gdYW]Z]WJ'`mUg_'Zcf'cbY''
Hi fb]h]b'U'gc'dfcj]XYg'i dXUhy'g'cb'h\Y]f'gmghYa 'ghUh' g'cb'Hk]hyf''

; YbYfU`mž'UggYgga YbhiHug_g'a i ghVY'gi Va]hhYX'Y`YVWfcb]\WJ``mij]U'Y]h\Yf'Hi fb]h]b'cf'U'A ccX`Y Ugg][ba Ybh''=b']bgHJb\W'g'k \YfY'h\]g']g'bchdcgg]V`Yž']hk]```VY'gHJhYX'cb'mci f'\\circ i fgY'g'A ccX`Y'g]hY'k]h\U`hYfbUh]j Y'gi Va]gg]cb'XYHJ]`g"

cfi]bZcfa Uhjcbicbi\ckihcigi Va]hUgg][ba Ybhgicbi]bYij]UiA ccXiY.i\hdg.#gh XYbhi bgk "YXi "Ui #\ck! gi Va]hUgg][ba Ybha ccXiY

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

D`U[]Uf]ga i]gii g]b[ih\Yik cfXgicfi]XYUgicZch\YfgiUbXidfYgYbh]b[ih\Ya iUgimci fick b"i=hWJbihU_Yia Ubm Zcfa gžZfca iXYi]VYfUhYiWXYUh]b[ihciUWW]XYbhU`mWcdm]b[iZfca iUigci fWYik]h\ci hiUW_bck iYX[Ya Ybh'

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

- i bXYfgfUbX mci f'f][\hg'UbX'fYgdcbg]V]`]hJYg'Ug'U'gh XYbhUhl BGK
- VY`Uk UfY`cZd`U[]Uf]ga ž`Wcdmf][\hz'l BGK `Gh XYbh7cXY`cZ7cbXi WhUbX`5VWWdhUV`Y`l gY`cZ I BGK `=\forall H`F Ygci f\W\g`Dc`]\m\m
- VY 'Uk UfY 'cZh\Y 'ghUbXUfXg 'cZVY\Uj]ci f'Yl dYWYX 'cZYj YfmcbY ']b 'h\Y 'l BGK 'Wca a i b]hm
- `cWUHY 'gYfj]WYg'UbX ']bZcfa UH]cb'UVci hI BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZh\YgY'UfYUg'k]``VY'ZJa]`]Uf'hc'mci žch\Yfg'k]``VY'bYk"'; U]b]b['U'gc`]X'i bXYfgHJbX]b['cZU``h\YfY`UhYX'UgdYWhg'cZ9@&9'k]``\Y`d'mci 'a U_Y'h\Y'a cghicZmci f'ghi X]Yg'UhI BGK "'\\hd.##qi V'YWfi |XYg"`]VfUfm'i bqk "YXi "Ui #\`]qY#JVci hY`]qY

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/
- fYi]Yk 'cZa Uf_g/
- I BGK '< YU'h\ 'UbX'GUZYhm'dc`]\\\Yg/
- YI Ua]bUh]cb dfcWYXi fYg/
- gdYWJU`Wcbg]XYfUHjcb`]b`H\Y`Yj YbhcZ]``bYgg`cf`a]gUXj Ybh fY/
- qh XYbhYei]miUbX X]qUV]`]m/
- UbX'ch\Yf'YggYbhJU`'UWUXYa]W]bZcfa UhJcbz'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

D\chc Vmi>]\VYfhi9VfU\la]\cb \l bqd\Uq\

7F = 7CG

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

5W_bck `YX[Ya YbhcZ7ci bhfm

 $K Y : UW\underline{b} ck `YX[Y : h, Y : 6YXY[U : dY cd `Y : k \ c : UfY : h, Y : hfUX]h\underline{b} cb : `W ghc X]Ubg : c Z : h, Y : `UbXg : cb : k \]WX : I B G K ? Ybg]b[hcb : WUa di g :]g : c WUhY X''$