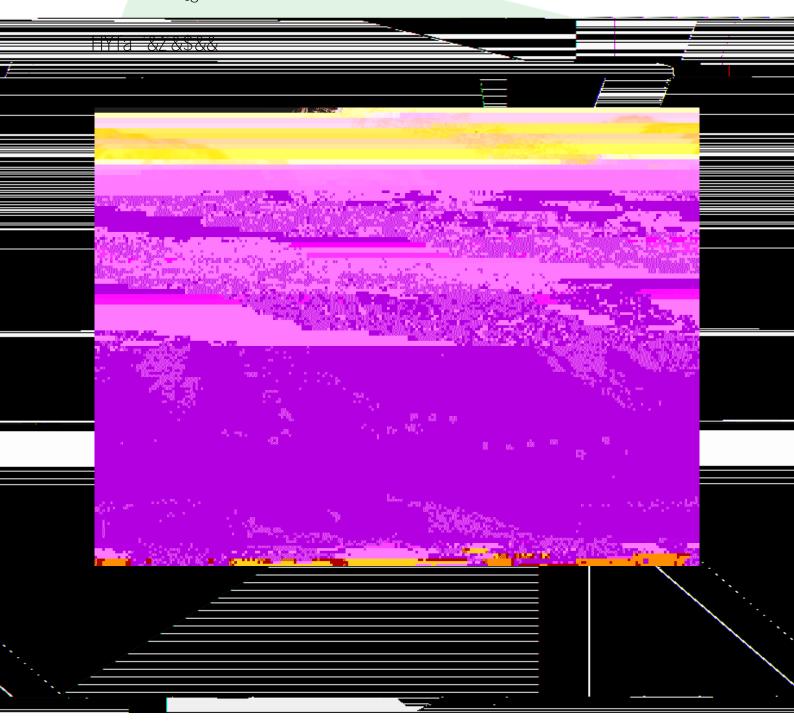


# **EDST6951**

A cXYfb '< ]ghcfm'A Yh\cX '&



### 5W\_bck `YX[ Ya YbhcZ7ci bhfm

I BGK '5frgž8Yg][ b'UbX'5fW,]hYWi fY'? Ybg]b[ hcb'UbX'DUXX]b[ hcb'Wa di gYg'UfY'Vi ]'hcb'5Vcf][ ]bU`@UbXg"'K Y'dUmci f'fYgdYWg'hc'h,Y'6]X'][ U''UbX'; UX][ U''dYcd'Yg'k \c'UfY'h,Y'7 i ghcX]Ubg'cZh,YgY'`UbXg" K Y'UW\_bck `YX[ Y'h,Y'5Vcf][ ]bU`'UbX'HcffYg'GhfU]h=g`UbXYf'dYcd'Ygž'h,Y': ]fghi5i ghfU`]Ubgžk \cgY'`UbXgž k ]bXg'UbX'k UhYfg'k Y'U``'bck 'g\UfYž'UbX'dUmfYgdYWhc'h,Y]f'i b]ei Y'j U'i Ygž'UbX'h,Y]f'Wbh]bi ]b[ 'UbX YbXi f]b[ 'W' h fYg'k \]W. XYYYdYb'UbX'Ybf]W. h,Y'`]ZY'cZci f'bUh]cb'UbX'Wca a i b]h]Yg"''

 $\label{eq:continuous} \begin{array}{ll} \text{$\stackrel{\cdot\cdot}{\to}$ U[Y'WciftYgmicZh\Y'CZh\Y'Dfc'J]WY!7\lubWY``cf'$$$ bX][Ybcig']$$ Ybcig'ghfUhY[m] $$ $$ U[Y'WciftYgmicZh\Y'CZh\Y'Dfc'J]WY!7$$ $$ U[Y'WciftYgmicZh\Y'CZh\Y'Dfc'J]WY!7$$ $$ U[Y'WciftYgmicZh\Y'CZh\Y'Dfc'J]WY!7$$ $$ U[Y'WciftYgmicZh\Y'CZh\Y'Dfc'J]WY!7$$ $$ U[Y'WciftYgmicZh\Y'CZh\Y'Dfc'J]WY!7$$ $$ U[Y'WciftYgmicZh\X'Ch'Zh\Y'Dfc'J]WY!7$$ $$ U[Y'WciftYgmicZh\X'Ch'Zh\Y'Dfc'J]WY!7$$ $$ U[Y'WciftYgmicZh\X'Ch'Zh\X$ 

## 7ci fgY 8YHJ] g

### $I b hg c Z 7 f Y X h^*$

#### K cf\_`cUX

%) \$`\ci fg`]bWi X]b[`WUgg`WcbHUWh\ci fgž`fYUX]b[gž`WUgg`dfYdUfUh]cbž'UggYgga Ybhž'Zc``ck 'i d`UWh]j]h]Ygž YhW

#### Gi a a UfmcZh\Y 7ci fgY

 $YZd Zd R Yj ScZU T`fcdV \ddot{z}; e Zd RgR2/RS]V e`S`eY f_UVcXcRUfReV R_U a`deXcRUfReV def UV_ed \ddot{z} YV T`fcdV T`_eV_e UV]2/gVd R_U RddVdd^ V_eh2/] SV ZUV_eZR] Wc S`eY Xc`fad`Wdef UV_ed \ddot{z} YV T`fcdV T`_eV_e UV]2/gVd R_U RddVdd^ V_eh2/RS YV T`fcdV ReV R_U a`deXcRUfReV def UV_ed \ddot{z} YV T`fcdV T`_eV_eV_eV R_UV_eZR R_U A`deXcRUfReV def UV_ed \ddot{z} YV T`fcdV T`_eV_eV R_UV_eZR R_UV R_UV_eZR R_UV$ 

±0.1h,]g.'Wei fgYz'mci 'k]```YUfb`\ck 'hc'hYUW\'A cXYfb'<]ghcfmUhUb'UXj UbW'X``Yj Y``]b`gYWebXUfm'WebhYI hg" Mci 'k]``i gY fY`Yj Ubhgm`UVi g`XcW a Ybhg'hc'XYj Y`cd']bbcj Uhjj Y`UbX'Yb[ U[ ]b[ ``Yggcb'd`Ubg`UbX W ff]W' i a 'd`Ubg"'Mci 'k]```YUfb'UbX'dfUWNjgY'U'fUb[ Y`cZhYUW\]b[ 'glfUhY[ ]Yg'h\Uha Ul ]a ]gY'h\Y``YUfb]b[ dchYbh]U``cZU``'mdYg'cZ`YUfbYfg']b`U'gUZYz'gi ddcfhj Yz'UbX'\][ \`mYb[ U[ YX`WUggfcca 'Ybj ]fcba Ybh''Mci k]```XYg][ b`Zcf'UbX']a d`Ya Ybh'hYUW\]b[ 'glfUhY[ ]Yg'h\Uh]b\WefdcfUhY'X][ ]hU``UbX'ch\Yf']bbcj Uhj Y`glfUhY[ ]Yg'' Mci 'k]```U`gc``YUfb`UVci hU`fUb[ Y`cZUggYgga Ybh'UbX'ZYYXVUW\_ghfUhY[ ]Yg']b'h\Y`X]gW]d`]bYz'k]h\`U'ZcW'g cb'UggYgga Ybh']b'h\Y`gYb]cf'gY\WebXUfmg\%cc`''

### 7ci fgY @YUfb]b[ Ci hWca Yg

- %" → XYbh]ZmYggYbh]U``Y`Ya Ybhg`cZh\Y`A cXYfb`< ]ghcfmGhU[Y`\*`Gm`UVi gž'UbX`h\Y`< ]ghcfm91 hYbg]cb UbX`A cXYfb`< ]ghcfm@]ZY`G\_]``g`gm`UVi gYg`Zcf`GhU[Y`\*ž'UbX`ghfUhY[]Yg`hc`gi ddcfhighi XYbhg`Ug`h\Ym hfUbg]h]cb`VYhk YYb`ghU[Yg`)`UbX`\*
- &" I gY 'glfcb[ '\_bck `YX[ Y 'cZgi V'YWhWcbhYbh'hc 'd`Ub 'UbX'Yj U`i UhY 'Wc\YfYbhž'[ cU`!cf]YbhYX`UbX W\U``Yb[ ]b[ '`Yqqcbqž'`Yqqcb'qYei YbW'q'UbX'hYUW\]b[ 'dfc[ fUa q'k \]W\ k ]```Yb[ U[ Y 'U```qhi XYbhq
- ' "GYhUW ]Yj UV`Y``YUfb]b[ 'ci Mca Yg#]bhYbh]cbg`hc`a UhW WcbhYbhž'hYUW ]b[ 'ghfUhY[ ]YgžfYgci fWg UbX`X]ZYfYbh'hmdYg`cZUggYgga Ybh'Zcf`U`i b]hcZk cf\_`]b`A cXYfb`< ]ghcfm
- ("Dfcj ]XY'WYUf'X]fYWqcbg'tc'cf[Ub]qY'UbX'qi ddcfhdfYdUfYX'UWqj ]hjYq'UbX'i qY'fYqci fWyq
- ) " 5qqYqq UbX fYdcfhcb qh XYbh YUfb]b[ "]b A cXYfb < ]qhcfmhc U``\_YmqhU\_Y\c`XYfq
- \*" =XYbhjZmh\Y`W\UfUWhYf]ghjWg`cZUb`YZZYWhjjY`AcXYfb`< ]ghcfmhYUW\Yf`UbX`h\Y`ghUbXUfXg`cZ dfcZYgq]cbU``dfUWhJWY`]b`hYUW\]b[ žYgdYWJU``mh\Y`Uhf]Vi hYg`cZ; fUXi UhY`hYUW\Yfq

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	gcWjU`ž'UbX']bhY``YWhi U``XYj Y`cda Ybh'UbX'WXUfUWhYf]ghJWg'cZ	
	gh XYbhg UbX \ck h\YgY a UmUZYWh YUfb]b[	
%"&"%	8Ya cbghfuhY'_bck `YX[Y'UbX'i bXYfghUbX]b['cZfYgYUfV\\']bhc	ł
	\ck 'gh XYbhg``YUfb`UbX`h\Y`]a d`]\Whcbg`Zcf`hYU\\]b[	
%"' "%	8Ya cbghfuhY _bck `YX[Y`cZhYUVX]b[ `ghfuhY[]Yg`h\uhiUfY	%ž <sup>*</sup> &
	fYgdcbg]j Y'hc'h\Y'`YUfb]b['ghfYb[h\g'UbX'bYYXg'cZghi XYbhg	
	Zfca X]jYfgY``]b[i]gh]WgžWi`hifU`žfY`][]cigžUbX	
	gcWcYWcbca ]WVUW_[fci bXg	
%") "%	8Ya cbghfuhY'_bck `YX[Y'UbX'i bXYfghUbX]b['cZghfUhY[]Yg'Zcf	%ž <sup>*</sup> &
	X]ZZYfYbh]Uh]b[ 'hYUW\]b[ 'hc'a YYhih\Y'gdYW]Z]W'YUfb]b[ 'bYYXg	

	cZghi XYbhgʻUWfcggʻh\YʻZ ```fUb[YʻcZUV]`]hJYg	[
&"%"%	8Ya cbqlfUlY'_bck YX[Y'UbX'i bXYfqlUbX]b['cZh\Y	%ž'&
	WcbWdngzgi VghUbWrUbXghfi WhifYcZh\YWcbhYbhUbX	
	hYUWX]b[~ghfUhY[]Yg~cZh\Y~hYUVX]b[~UfYU	
8"8"%	C f[ Ub]gY 'WcbhYbh]bhc 'Ub 'YZZYWfj Y 'YUfb]b[ 'UbX'hYUWX]b[	%ž'&
	gYei YbW	
8"' "%	I gY W ff]W i a ž UggYgga YbhUbX fYdcfh]b[ '_bck `YX[ Y hc	%ž <sup>*</sup> &
	XYg][b"YUfb]b['gYei YbWYg"UbX"Yggcb"d"Ubg	
&") "%	? bck 'UbX'i bXYfgHJbX'`]hYfUWnUbX'bi a YfUWnhYUWX]b[	%Ž*&
	ghfuh/[]Yg^UbX^h\Y]f^Udd^]WUh]cb^]b^h/UW\]b[~UfYUg	
8"*"%	=a d`Ya Ybh'hYUVX.]b[ 'ghfUhY[]Yg`Zcf'i g]b[ '=7 H'hc 'Yl dUbX	&
	W ff]W i a "YUfb]b[ cddcfh b]h]Yg Zcfgh XYbhg	
' "%"%	GYh`YUfb]b[ '[cu`g`h\uhdfcj]XY`UW\]Yj UV`Y`W\u``Yb[Yg`Zcf	1
	ghiXYbhgicZjUfm]b[iVX,UfUVM/f]gh]Wg	
' "&"%	D`Ub``Yggcb'gYei YbWYg'i g]b[ '_bck `YX[ Y'cZghi XYbh	%Ž*&
	YUfb]b[žWcbhYbhžUbXYZZYWnjYYhYUWX]b[ ghfUhY[]Yg	
' "' "%	±bWiXY'U'fUb[Y'cZhYUWX]b['ghfUhY[]Yg	1
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	=7 H 'h\ Uh'Yb[ U[ Y 'gh XYbhg ']b 'h\ Y]f ``YUfb]b[	
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	i gYX hc Yj U'i UhY hYUVX]b[ dfc[fUa g hc ]a dfcj Y gh XYbh	
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) "%"%	8Ya cbglfUhY i bXYfghUbX]b[ cZUggYgga YbhglfUhY[]Ygž	&Ž''
	]bWiX]b[^]bZcfaU``UbX`ZcfaU`žX]U[bcgh]WžZcfaUhjjYž'UbX	
	gi a a Uhji Y Uddfc UVX Yg hc UggYgg ghi XYbh YUfb]b[	
) "&"%	Dfcj ]XY ZYYXVUW_hc ghi XYbhg cb h\Y]f YUfb]b[	ı
) "' "%	A U_Y`Wcbg]ghYbhUbX`Wca dUfUV`Y`↑X[ Ya Ybhg	%Ž <sup>*</sup>
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	XUHU'hc'Yj U'i UHY'gh XYbh'YUfb]b['UbX'a cX]ZmHYUWX]b[	
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*" "%	GYY_'UbX'Udd`mWcbglfi Wfj Y'ZYYXVUW_'Zfca 'gi dYfj ]gcfg'UbX	%
	hYUWXYfg'hc']a dfcjY'hYUWX]b['dfUWfJWYg	
+"%"%	I bXYfglUbX'UbX'Udd`ml\Y'_Ymdf]bW]d`Yg'XYgWf]VYX']b'WcXYg	1
	cZYh\]\Wg`UbX`WcbXi\WhZcf`h\Y`hYUW\]b[`dfcZYgg]cb	

[cZYh\]Wg`UbX`WcbXi WhZcf`h\Y`hYUW\]b[ +`7cj YfYX`Xi f]b[`h\Y`Wci fgY

	6UW_[ fci bXg"	&ž`*	ł
•	ł '7 cj YfYX'Xi f]b[ 'h\Y'Wti fgY	•	

## HYUW ]b[ GhfUhY[]Yg

F. Uh] c. b. U`Y`Zcf`h `Y`] b. Wig] c. b. `c. Z`WcbhYbh`UbX`hYUW.] b[``UddfcUW.

 $5 \text{ `fUb[ Y`cZghi XYbhi WibhiYX`UWhjj ]hjYg`k ]```Zcfa `h\Y`VUg]g`cZh\Y`Wci fgY''`H\YgY`UWhjj ]hjYg`k ]```XfUk `cb`h\Y df]cf'_bck `YX[ Y`cZh\Y`ghi XYbhg`UbX`k ]```U``ck `h\Ya `hc`Yb[ U[ Y`]b`fY`Yj UbhiUbX`W\U``Yb[ ]b[ `YI dYf]YbWig$ 

## 5ggYgga Ybh

5ggYgga YbhhUg_	K Y][ \h	8iY'8UHY	7 ci fgY @YUfb]b[ Ci HWca Yg 5ggYggYX
%"·GHJ[Y`*`gWcdY`UbX gYei YbWY`UbX`UggYgga Ybh HJg_	(\$1	\$, #\$, #&\$&&'\$).\$\$'DA	%ž &ž ' ž ( ž )
&""GhU[Y"*"i b]hcZk cf_	*\$1	&- #\$, #&\$&&`\$).\$\$`DA	%ž'&ž'' ž')

5ggYgga Ybh% 'GHJ[ Y'\* 'gWcdY'UbX'gYei YbWY'UbX'UggYgga Ybh'HJg\_

8i Y'XUhY. '\$, #\$, #&\$&&'\$).\$\$'DA

D5F H'%'7 fYUhY'U'gWcdY'UbX'gYei YbWfž]bWi X]b[''YUfb]b['ci hWca Ygž'Wcj Yf]b[''%\$'k YY\_g'Zcf'U'MYUf''%dfY`]a ]bUfmWUgg"

D5FH:&:DfYdUfY:Ub:UggYggaYbhitUg\_`fbchif gh'Ub:YggUmŁ'h\UhiX]fYWhm`]b\_g'hc'h\Y'hYUW\]b['UbX``YUfb]b[']bhYbhJcbg'Zcf'h\Y'hYfa'g'k cf\_"'Mci f'gWcdY'UbX'gYei YbWY'a i gh]bX]WUhY'k \Yb'h\Y'tUg\_'k]``c\WY f'UbX`\ck h\Y'ZYYXVUW\_'Zcfa'h\Y'gi a a Uh]j Y'tUg\_'WUb'U`gc'VY'i gYX'Zcf'Zcfa Uh]j Y'UggYgga Ybh'''A U\_Y'gi fY'mci f']bghfi WhJcbg'Zcf'h\Y'tUg\_'UfY'[fUa a Uh]WU`mWcffYWhUbX'Wca a i b]WUhY'YZZYWh]j Y`m'Zcf'ghi XYbhg"

8 Yg][ b'U'a Uf\_]b[ 'fi Vf]\\\' k \]\\\ 'U'gc']b\\'i XYg'gdU\\\' Zcf'U'\c']gh]\\\\\can Ybh'

Dfcj ]XY UbX Yl Ya d`Uf'ghi XYbhUbgk Yf'Zcf'h\Y UggYgga YbhHUg\_"'K f]hY U ZYYXVUW\_ Wca a YbhZcf'h\]g

1- dcbaik\MiUba aga Y : %

FI 6F = 7 # 998657? G < 99H 98GH\*-)%A C89FB < €HCFMA 9H < C8 & IBGK G7 < CC@C: 98I75H€B

 $5\,ggYgga\ Ybh'HUg\_'\% \, 'GHJ[\ Y'*'gWcdY'UbX'gYei\ YbW''UbX''UggYgga\ Ybh'HJg\_''$ 

GdYWJZJW7f]hYf]U	··flŁ—		 2fŽŁ
I bXYfgHJbX]b[ cZh\Yei Ygh]cbcf]ggi Y'UbX'h\Y'_YmWcbWfdhg]bj c`j YX			


FI 6F = 7 # 998657? G < 99H 98GH\*-)%A C89FB < €HCFMA 9H < C8 & IBGK G7 < CC@C: 98I75H€B

5ggYgga Ybh'HUg\_'& 'GhJ[Y'\* i b]hcZk cf\_

GdYWJZJW7f]HYf]U	"flŁ—		:	2fŽŁ
I bXYfghJbX]b[ 'cZ'h\Y'ei Ygh]cb'cf']ggi Y'UbX'h\Y'_YmWcbWYdhg ]bj c`j YX				
• 8Ya cbglfUllYg`_bck`YX[Y`cZgY`YWlYX`GlU[Y`*`Wci fgY`UbX				

# 5 hhyb XUb WY F Yei ]fYa Ybhg

GWkcc`cZ9Xi WUhjcb'5HnYbXUbWYFYei ]fYa Ybh

		< ]ghcfmiYggUmg
	1	•

	<ul><li>FYgci fW/g'UbX'UWfj ]hJYg</li><li>8]ZZYfYbhJUhJcb'UbX'`]ZY'g_]``g</li></ul>
Hi kcf]U`	<ul> <li>Dfc[fUa 'UbX'i b]hfYj]Yk</li> <li>G_]``g'UbX'WcbWdhg']b'GhU[Y'*'A cXYfb</li> <li>ghcfm</li> <li>9ggUmlk f]h]b[</li> <li>8]ZYfYbh]Uh]cb'UbX'``]ZY'g_]``g</li> </ul>

F Ygci fWYg DfYgWf]VYX F Ygci fWYg

# Gi Va ]gg]cb cZ5ggYgga YbhHUg\_g

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

☐ Inc i YbWci bhYf U'dfc V`Ya ik \Yb 'UrhYa dh]b[ 'hc 'gi Va ]hmci f 'Ugg][ ba Ybhth\fci [ \ 'Hi fb]h]bž'd`YUgY

HY 'Yd\cbY'9I hYfbU``Gi ddcfhcb'-',) '' ' ' %cf 'Ya U] 'th\Ya 'cb'YI hYfbU'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'mYUfŁ"' ☐ mci
UfY'i bUV'Y'hc 'gi Va ]hmci f'Ugg][ ba YbhXi Y'hc'U'ZUi 'hk ]h. 'Hi fb]h]b'mci 'a Um'Udd'mZcf'Ub'YI hYbg]cbž'Vi hmci

# 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"`=hWJb`hJ\_Y`a Ubm Zcfa gžZca `XY`]VYfUhY`W\YUh]b[ 'hc`UVW]XYbhJ``mWcdm]b[ 'Zfca `U`gci fWY`k ]h\ci hUW\_bck `YX[ Ya Ybh'

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

 $\begin{tabular}{ll} \hline \textbf{7.cdm}b[...] g]b[...] MY cf'j Yfmg]a] ``Uf'k cfXg'hc'h\Y'cf][] bU``HYI hcf']XYU'k]h\ci h`U\W_bck ``YX[]b[...] b[...] MY cf'i g]b[...] bU``HYI hcf']XYU'k]h\ci h`U\W_bck ``YX[]b[...] b[...] MY cf'i g]b[...] a UhYf]U`gž']XYUg'cf'WcbW'dhg'\bar{Z}ca '`U'Vcc_\bar{Z}Ufh]WY\bar{Z}ca '`U'Vcc_\bar{Z}Ufh]\bar{Z}ca '`U'Vcc_\bar{Z}Ufh]\bar{Z}ca '`U'Vcc_\bar{Z}Ufh]\bar{Z}ca '`U'Vcc_\bar{Z}Ufh]\bar{Z}ca '`U'Vcc_\bar{Z}Ufh]\bar{Z}ca '`U'Vcc_\bar{Z}Ufh]\bar{Z}ca '`U'Vcc_\bar{Z}Ufh]\bar{Z}ca '`U'Vcc_\bar{Z}Ufh]\bar{Z}ca '``U'Vcc_\bar{Z}Ufh]\bar{Z}ca '``U'Vcc_\bar{Z}Ufh]\bar{Z}ca '``U'Vcc_\bar{Z}Ufh]\bar{Z}Ufh]\bar{Z}Ufh]\bar{Z}ca '``U'Vcc_\bar{Z}Ufh]\bar{Z}U$ 

# 5 WUXYa ]W + DZcfa Uh]cb

8 i Y 'hc 'Yj c'j ]b[ 'UXj ]\W 'VmBGK '< YU't\ ž'ghi XYbhg'a i gh'\W.Y\<u>V</u>'Zcf'i dXUh\YX']bZcfa Uh]cb 'fY[ UfX]b[ 'cb`]bY 'YUfb]b[ 'Zcf'U``'5fhgž'8Yg][ b 'UbX'5f\W.]h\Y\ni fY '\wci fgYg't\]g't\Yfa 'f] ]U'A ccX`Y'cf'\wci fgY']bZcfa Uh]cb dfcj ]\XYX"Ł

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

- fYei YghgʻZcfʻYl hYbg]cb/
- `UhY gi Va ]gg]cbg [ i ]XY`]bYg/
- fYj]Yk cZa Uf\_g/
- I BGK '< YU`h\ 'UbX'GUZYhm'dc`]W]Yg/
- YI Ua ]bUh]cb dfcWYXi fYg/

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