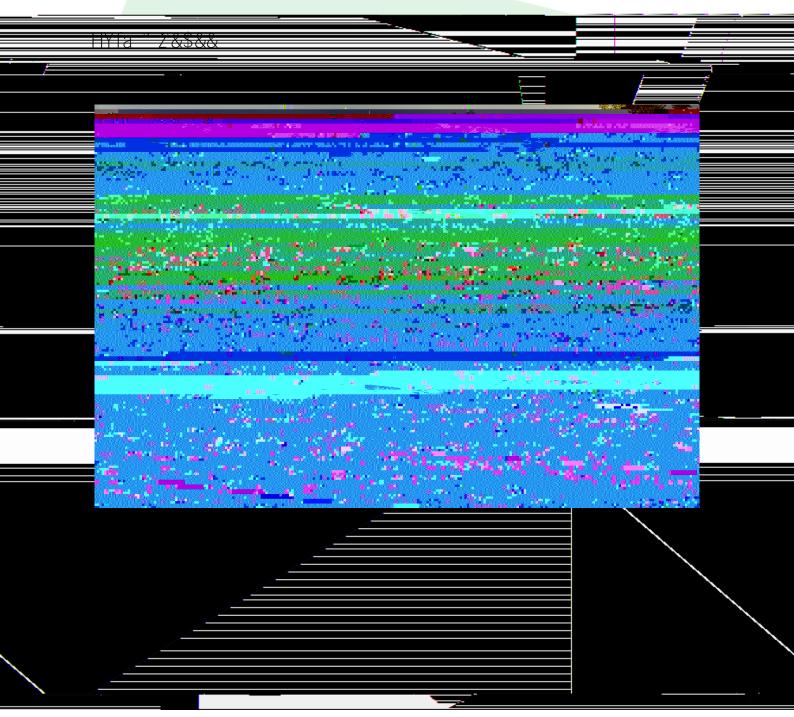


CVEN9513

5Xj UbWX: ci bXUhcb 9b[]bYYf]b[



7ci fgY Cj Yfj]Yk

GHJZ:7cbHJWh8YHJ]`g

7cbj Ybcfg

BUa Y	9a U]`	5j U]`UV]`]hm	@cWUh]cb	D\cbY
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GWXcc~7cbhJWh~abZcfa Uhlcb

<u>9b[]bYYf]b[:'Ghi XYbh'Gi ddcfh'GYfj]WYg'-</u>'H\Y'Bi WYi g'! 'Ybfc`a Ybhž'dfc[fYgg]cb'W\YW<u>g</u>ž'WUg\'fYei Yghgž Wci fgY']ggi Yg'cf'dfc[fUa!fY`UhYX'ei Yf]Yg'

9b[]bYYf]b[*\DXi glf]U``HfU]b]b[-- \DXi glf]U``lfU]b]b['ei Ygl]cbg'

LBGK Gh Xm5VfcUX - gh XmUVfcUX gh XYbhYbei]f]Yg flcf]bVci bX gh XYbhgŁ

I BGK '91 WXUb[Y'-ghi XYbhYl WXUb[Y'Ybei]f]Yg'flcf']bVci bX'ghi XYbhgŁ'

<u>LBGK : i hi fY Ghi XYbhg</u> - dchYbhJU `ghi XYbhYbei]f]Yg Y"["'UXa]gg]cbgž ZYYgž dfc[fUa gž WfYX]hHfUbgZYf

D\cbY.

fŽ*%%L'-',),)\$\$ - Bi WYi g Gh XYbh<i V

fŽ*%%&£'-',) '+**%'-'9b[]bYYf]b['=bXi ghf]U`'HfU]b]b['

fŽ*%%&L-',) " %+- '-1 BGK 'Gh Xm5VfcUX'UbX'I BGK '91 WXUb[Y'fZcf']bVci bX'gh XYbhgL'

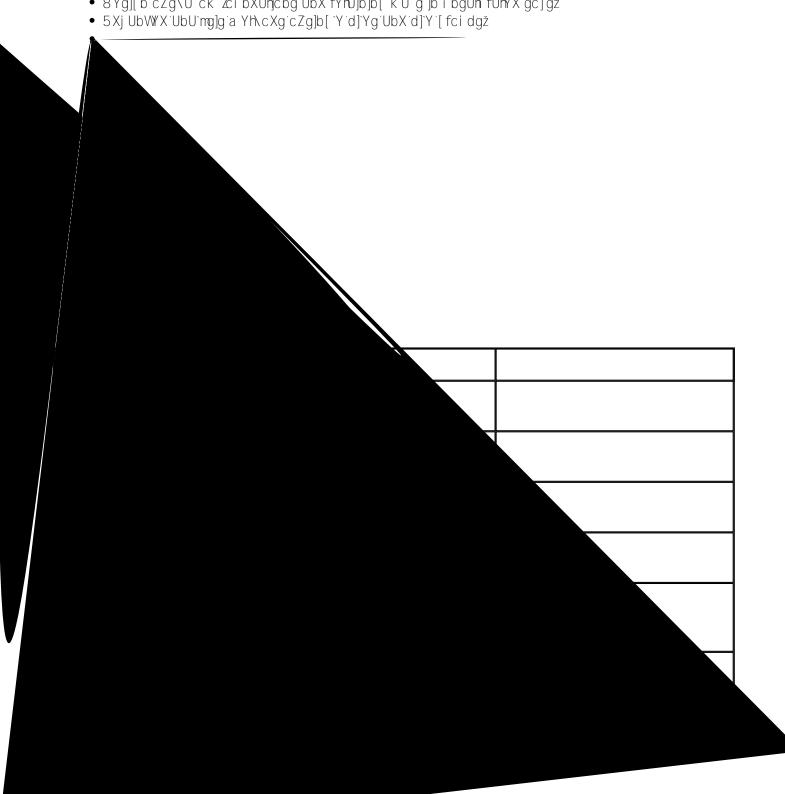
7ci fgY 8YHJ] g

 $l b]hg cZ7 fYX]h^*$

Gi a a UfmcZh\Y 7ci fgY

 $\label{eq:continuity} Dfc\ YWiVUgYX``YUfb]b[\ 'Zcf'i\ bXYfgHJbX]b[\ 'h\ Y'df]bW]d`Yg`cZ$

- $\bullet \ 8 \ Yg][\ b \ "c \ Zg \ U"\ "ck \ "Zci \ b \ X \ U' \ "g' \ Ub \ X' \ "f \ Y \ "U] \ b] \ b[\ "k \ U"\ "g'] \ b'' \ i \ bg \ U'' \ K'' \ Tgc] \ "gz"$



 $\label{eq:definition} D`YUgY`fYZYf`hc`h\Y`]bZcfa~Uh]cb`]b`A~ccX`Y$

GY]ga]W5ggYgga YbhcZFYhJ]b]b['K U``g"

5ggYgga Ybh'Wf]hYf]U

EWWSee[Y`_WfcgWef[a`gb'aSVWWa`?aaV'W

5ggYgga Ybh(. \pdg\dYfU :]bU \9I Ua

&'<fg'cdYb'Vcc_'+bgdYfU'Yl Ua "

<i fX`Y`fYei]fYa Ybh

 $5 \text{ `a Uf_`cZUh``YUgh'($i $ i $]b 'h Y 'Z]b U ``YI Ua]b Uh]cb `]g `fYei]fYX `VYZcfY 'h Y `WUgg `k cf_`]g `]b Wi XYX `]b `h Y `Z]b U `a Uf_"$

5 hmy b X Ub WY F Yei] f Ya Yb hg

7ci fgY'GWXYXi `Y

J]Yk 'WUgg'ha YHUV'Y

H]a YtUV`Y

8UhY#AcXi`Y	HmdY	7 c bhYbh
&, # #&\$&&	@YWhifY	6YUf]b[`WUdUW]hmcZg\U``ck Zci bXUh]cbg.`Wcbj Ybh]cbU``UddfcUWXYgž'a Yh\cXg cZUbU`mgYg"
		DfcV`Ya gʻ]bʻVYUf]b[ʻWUdUW]hmcZg\U`ck Zci bXUh]cbg. ghfYb[h\/gh]ZbYggž]ffY[i`Uf g\UdYgžB[žBW*`UmYfYX`gc]`gžgYhhYa Ybhg/ Wbgc`]XUh]cbg"
		G\U``ck 'Zci bXUh]cbg']b'i bgUhi fUhYX'gc]`g.'Gc]`gi Wh]cb'UbX']hg']bWcfdcfUh]cb']bhc'h\Y'YZZYWh]j YghYygg'UbX'gc]`ghYyb[h\"'9 hYbg]cb'cZVYUf]b[WJdUW]hmh\Ycfm''?bck`YX[Y'[Udg"
		5gg][ba Ybh% + bhc Xi Wh]cb Ub X Gc Zhk UfY 5bU mg]g. + WfdcfUh]b[gi Wh]cb]bhc U VYUf]b[WJdUW]hmdfc V Ya i g]b[G][a U#K"
`&-##&\$&&	@YWhi fY	G\YYhd]`Y`k U``g. Wcbglfi WfjcbžWUbhj`Yj Yf`k U``g XYg][bYX`Vml ? 'a Yh\cXž'l G5 'a Yh\cXž'UbX'?]b[f% -) Ł'UbX'8 Umf% Ł'a Yh\cX/UbW\cfYX'k U``g"
		7 UgY 'ghi Xm' '7 i hhYf 'gc]` 'a]l 'fl7 GA Ł'k U``g']b gUbX. 'Z bXUa YbhU``WcbWdhg'UbX']bbcj Uh]cbg h\fci [\'Z]VfY'fY]bZcfVWa Ybh'
		5 bWkcfYX`UbX`glfi lftYX`k U``gžX]Ud\fU[a`k U``gžgc]``UbWkcfg`UbX`bU]`g.`Wcbglfi WfjcbžYUffkdfYggi fY`Ybj Y`cdžXYg][b`UbX`UbU`mg]g`cZk U``gUbX`gc]``UbWkcfg"
		7 UgY 'ghi Xm' 'B]Wc```<][\k Um'Wc``UdgY
		FYHJ]b]b['k U``g']b'i bgUhi fUhYX'gc]`g. '9 hYbg]cb cZYUfh\ 'dfYggi fY'h\Ycfm''? bck 'YX[Y'[Udg"
		5gg][ba Ybh'&ʻ±bhfcXi Wh]cb"
' \$ <i># #</i> &\$&&	@YWhi fY	5Xj UbWYX UbU`mg]g`cZ'g]b[`Y`d]`Y. ``cUX!

		gYthiYa Ybh'UbU`mg]g'cZg]b[`Y'd]`Y'Vm`cUX'tfUbgZYf a Yth`cXž'UbU`mtjWU``a Yth`cX'cZF UbXc`d\`UbX K fcth`ž'Y`UgtjWa Yth`cX"'-\abtfcXi Wfjcb'tc'bi a Yf]WU` X]gWfYtjnUtjcb'cZ`cUX'tfUbgZYf'a Yth`cX"'-\abzi YbWY ZUWtcf'a Yth`cX'Zcf'd]`Y'[fci d" 7 Ugh']b!g]hi 'd]`Yg. 'Wcbgthi Wfjcbz'i `tja UtY'VYUf]b[WUdUWjtmUbX'U``ck UV`Y'VYUf]b['WUdUWjtmVUgYX'cb tc`YfUV`Y'gYthYa Ybh'cZVcfYX'WUgh']b!g]hi 'd]`Yg"
\$(#%\$#&\$&&	@YWhi fY	; YchYWXb]WU`YUfh\eiU_YYb[]bYYf]b['6Ug]Wg #blfcXi Wljcbžh\YcfmcZWcbhjbYblU`Xf]ZhUbX`d`UhY hYWcb]WgžZJi ha YWXUb]ga gžei UbhjZjWJhjcb`cZ YUfh\ei U_Y`g]nYžk Uj Yg`]b`U`gYa]!]bZjb]hY`VcXmž WcbWYdhcZXUad]b[žacXU``UbU`mg]gžWcbghjhi hjj Y VY\Uj]ci f`cZWhW]W`cUXYX`gc]`gž`]ei YZJWljcb" GY]ga]WXYg][b`cZZcchjb[g`UbX`d]`Yg GY]ga]WVYUf]b[`WJdUW]mcZg\U``ck`Zci bXUhjcbž gYhiYaYbhcZzci bXUhjcb`]b``]ei YZJYX`[fci bXžhchU` UbX`X]ZYfYbhjU``gYhiYaYbhcZg\U``ck`Zci bXUhjcbž gY]ga]WdYfZcfaUbW'`cZd]`Y`Zci bXUhjcbžZJ]`i fY aYWXUb]ga`cZd]`Ygi ddcfhYX`ghfi WhifYgžgY]ga]W dYfZcfaUbW'`cZd]`Yg`]b``]ei YZJUV`Y`gc]`gžgY]ga]W XYg][b`cZd]`Yg`UbX`XYg][b`WXYW_g"
\$) #%\$#&\$&&		

FYgci fWfg

FYWca a YbXYX FYgci fWfg

#i]g'bchbYW/ggUfmhc'Vi m'U'hYI hVcc_'Ug'h\Y'bchYg'dfcj]XYX'UfY'YI hYbg]j Y'UbX'gi Z]WJYbh''H\YgY'k]``]bWi XY'fYZYfYbW/g'hc'gYj YfU`'Vcc_g'UbX'bi a Yfci g'UfhJWYg']b'h\Y'hYW\b]WU```]hYfUhi fY"'

7 ca d`Yhjcb`cZh\Y`Ugg][ba Ybhg`a UmifYei]fY`f]Z]bhYffYghYXŁ'ghi XYbhg`hc`fYZYf`hc`h\YgY`k cf_g"

8 Ug 6 fU 10 A ž D f]b W]d Yg c Z: ci b X Uh]cb 9 b []b Y Y f]b [', Y 'G ₹ 7 Y b [U[Y @Y Ufb]b ["

GhYj Yb "@" ? fUa Yfž; YchYW\b]WU``9Ufh\ei U_Y '9b[]bYYf]b[ž'DYUfgcb '9Xi WUh]cb"

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

D`YUgY`fYZYf`hc`h\Y`A ccX`Y`dU[Y`cZh\Y`Wci fgY`Zcf`Z fh\Yf`[i]XUbW\`cb`UggYgga Ybhigi Va]gg]cb"

I BGK `\Ug`U`ghUbXUfX``UhY`gi Va]gg]cb`dYbU`hmcZ

•)ı 'dYf'XUmž'Zcf'U``'UggYgga Ybhg'k \YfY'U'dYbU'hm'Udd`]Ygž'WUddYX'Uh'Zjj Y'XUmg'f1%&\$`\ci fg\z'UZhYf k\]WX'U'ghi XYbh\WUbbchgi Va]h'Ub'UggYgga Ybhž'UbX'bc'dYfa]hhYX'j Uf]Uh]cb"

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

6Yk UfY "5b" Ugg][ba Ybhh\Uh]bWi XYg"d`U[]Uf]gYX"a UhYf]U``k]```fYWY]j Y"U"\$ı ': U]`žUbX`ghi XYbhg`k \cd"\U[]Uf]gY\"a UmZU]``h\Y'Wci fgY"'Ghi XYbhg`k \cd"\U[]Uf]gY\"UfY\"U`gc"`]UV`Y'hc"X]gW]d`]bUfm'UWf]cbž]bWi X]b[YI Wi g]cb'Zfca 'Ybfc`a Ybh'

 $D`U[]Uf]ga ~]g'hY'i gY'cZUbch\Yf'dYfgcb'g'k cf_'cf']XYUg'Ug']Zh\Ymk YfY'mci f'ck b'''K ~Yb']h]g'bYWYggUfmcf XYg]fUV'Y'hc'i gY'ch\Yf'dYcd'Y'g'a UhYf]U`'mci 'g\ci `X'UXYei UhY`mUW_bck `YX[Y'k \cgY'k cfXg'cf']XYUg'h\Ym$

5 WUXYa]W = DZcfa Uhjcb

:]bU`'9l Ua]bUh]cbg.

:]bU`YI Ua g`]b`H' `&\$&&`k]```VY`\Y`X`cb`]bY`VYlk YYb`&) h\`Bcj Ya VYf`!`, h\`8YWYa VYf`&\$&&`]bWi g]j Yž`UbX gi dd`Ya YbhJfmYl Ua g`VYlk YYb`- h\`!`% h\`>Ubi Ufm&\$&' `]bWi g]j Y"'Mci `UfY`fYei]fYX`hc`VY`Uj U]`UV`Y`cb h\YgY`XUhYg"`D`YUgY`Xc`bchhc`a U_Y`UbmdYfgcbU``cf`lfUj Y``UffUb[Ya Ybhg`Xi f]b[`h\]g`dYf]cX"'

57589A = 7.58J = 7.9

- ? YmiGtUZztc '7 cbtUWiZcf '5 WUXYa]W5 Xj]WY flc[']b 'k]th 'mci f 'n=8 'UbX dUggk cfXt '\text{htdg.#|btfUbYtiW| Yb["i bgk "YXi "Ui # YmlgtUZItc!WcbtUWiXi f]b[!mci f!gti X]Yg!Utli bgk
- <u>? Ymil_BGK_'8 UhYg'</u>! 'Y["'7 Ybgi g'8 UhYžYI Ua 'XUhYgž``UghiXUmhc 'Xfcd'U'Wci fgY'k]h\ci h UWUXYa]\#Z|bUbW]U```]UV]`]miYhW''
- 7 J 9B 'Ghi XYbhi=bhfUbYhrflc[']b 'k]h\ 'mci f'n=8 'UbX dUggk cfXŁ '\hadg.#|bhfUbYh'W| Yb["i bgk "YXi "Ui #ahi XYbh]bhfUbYh'
- Gh XYbh@ZY 'Uh7 J 9Bž]bWi X]b['Gh XYbh GcW]Yh]Yg. \(\frac{1}{2} \) Htdg. #k k k "i bgk "YXi "Ui #Yb[]bYYf]b[#M] \(\frac{1}{2} \)! UbX!Ybj]fcba YbHU\!Yb[]bYYf]b[#gh XYbH\]ZY \(\frac{1}{2} \)
- GdYV)JU``7 cbg]XYfUhjcb. \https://https://www.https://https://https://https://https://www.https://ht

5ddYbX]I . '9b[]bYYfg'5i ghfU`]U'f95Ł'DfcZYgg]cbU` '9b[]bYYf'7ca dYhYbWm GHJbXUfX

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?bck `YX[Y`UbX'g_]```VUgY	
D9%"%7ca dfY\Ybg]j Yž'h\YcfmVUgYX'i bXYfghUbX]b['cZh\Y'i bXYfd]bb]b['bUhi fU`'UbX d\mg]\WJ`'g\WJYb\Wg'UbX'h\Y'Yb[]bYYf]b['Z bXUa YbhJ`g'Udd`]\WJV`Y'hc'h\Y'Yb[]bYYf]b['X]g\WJd`]bY	
D9%"&"7cbWYdh U``i bXYfgHJbX]b['cZh\Y'a Uh\Ya Uh]Wgžbi a Yf]WJ``UbU`mg]gžgHJh]gh]Wgž'UbX Wca di hYf`UbX`]bZcfa Uh]cb'gW]YbWYg'k\]W\'i bXYfd]b'h\Y'Yb[]bYYf]b['X]gW]d`]bY	
D9%" '=b!XYdh\'i bXYfghUbX]b['cZgdYW]U`]ghVcX]Yg'cZ_bck `YX[Y'k]h\]b'h\Y'Yb[]bYYf]b[X]gW]d`]bY	
D9%'('8]gWfba YbhcZ_bck `YX[Y 'XYj Y`cda YbhUbX'fYgYUfWX 'X]fYWf]cbg'k]h\]b'h\Y Yb[]bYYf]b['X]gW]d`]bY	
D9%) '? bck 'YX[Y'cZYb[]bYYf]b['XYg][b'dfUWjWY'UbX'WcbhYl hi U`'ZJWcfg']a dUWjb['h\Y Yb[]bYYf]b['X]gWjd`]bY	
D9%"* I bXYfgHJbX]b['cZh\Y'gWcdYž'df]bW]d`Ygž'bcfa gž'UWVci bHJV]`]h]Yg'UbX'Vci bXg'cZ gi gHJ]bUV`Y'Yb[]bYYf]b['dfUWfJWY']b'h\Y'gdYW]ZJWX]gW]d`]bY	
9b[]bYYf]b['Udd`]WUh]cb'UV]`]hm	
D9&"%5dd`]WUh]cb`cZYgHUV`]g\YX`Yb[]bYYf]b[`a Yh\cXg`hc`Wca d`Yl `Yb[]bYYf]b[`dfcV`Ya gc`j]b[
D9&"&": `i YbhiUdd`]WUh]cb'cZYb[]bYYf]b['hYVXb]ei Ygžhcc`g'UbX'fYgci fWYg	
D9&" '5dd`]WUh]cb`cZgmghYa Uh]WYb[]bYYf]b[`gmbh\Yg]g`UbX`XYg][b`dfcWYggYg	
D9&"('5dd`]WUh]cb'cZgmghYa Uh]WUddfcUWXYg'hc'h\Y'WcbXi WhUbX'a UbU[Ya YbhcZYb[]bYYf]b[dfcYWng	
DfcZYgg]cbU`'UbX'dYfgcbU`'Ultf]Vi hYg	
D9' "%'9h\]WU`'WcbXi Wh'UbX'dfcZYgg]cbU`'UWWci bHJV]`]hm	
D9' "&'9ZYWAj Y'cfU`'UbX'k f]MYb'Wcaaib]WUAjcb']b'dfcZYgg]cbU`'UbX'`Um'XcaU]bg	
D9' "' '7 fYUhjj Yž']bbcj Uhjj Y'UbX'dfc!UWhj Y'XYa YUbci f	
D9' "('DfcZ/gg]cbU`i gY'UbX'a UbU[Ya YbhcZ]bZcfa Uh]cb	
D9' ") 'C fXYf'mia UbU[Ya YbhcZgY`Zi'UbX`dfcZygg]cbU``WcbXi Wh	
D9' "* '9ZZYWNjj Y'NYUa 'a Ya VYfg\]d'UbX'NYUa 'YUXYfg\]d	