

# **CVEN9630**

; fci bXk UhYf'<mXfc`c[m'UbX'FYgci fWYg'5bU`mg]g



# 7ci fgY<sup>\*</sup>Cj Yfj ]Yk

# GhJZZ 7 cbhJWh 8 YhJ] g

## 7cbj Ybcfg

BUa Y	9a U]`	5j U]`UV]`] <b>h</b> m	@cWUh]cb	D\cbY
A Uffijb 5bXYfgYb	a "UbXYfgYb4 i bgk "YXi "Ui	6mUddc]bha Ybh j ]U^A ccX`Y	79' \$'	

## @YWhi fYfg

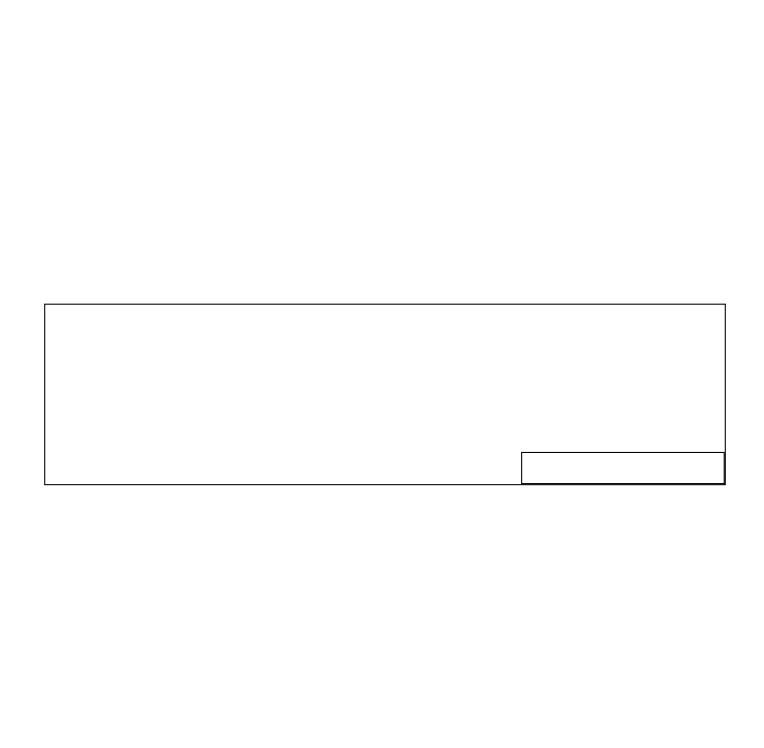
BUa Y	9a U]`	5j U]`UV]`]lm	@cWUh]cb	D\cbY
A U\a ccX'GUXUH bccf]	a "gUXUhbccf]4 i bgk "YXi "Ui	6m'Uddc]bha Ybh j ]U'A ccX'Y		

GWXcc`7cbHJWh ≠bZcfa Uh]cb

9b[]bYYf]b['Gh XYbhGi ddcfhGYfj]\Wg

7	ci fgY 8YM]`g
I	b]hg~cZ~7fYX]h~*

 $\label{thm:cby:cby:cb} $$ 'YWi fY'g`chcb'K YXbYgXUm'Yj Yb]b[g`fW, .$$'hc'&$.$$E'UbX'cbY'Xi f]b['k cf_]b['\ci fg'cb'H\i fgXUmg'fW(.$$'!'%'.$$E'''Mci 'UfY'glfcb['mYbWci fU[YX'dUft]W]dUhY'fYU'!h]a Y']b'h\Y'cb`]bY'`YWi fYg'''-Z' mci 'UfY'i bUV'Y'hc'dUft]W]dUhY'cb']bY']b'fYU'!h]a YE'h\Yb'mci 'WUb'fYj ]Yk 'h\Y'fYWcfXYX''YWi fYg''''''$ 



#### 5ggYgga Ybh' . 5gg][ ba Ybh'

GHJfhXUhY. '% #+#&\$&&
Gi Va ]gg]cb'bchYg. 'Gi Va ]gg]cb'j ]U'A ccX'Y
8i Y'XUhY. '&- #+#&\$&&
8YUX`]bY'Zcf'UVgc`i hY'ZJ]`. '') 'XUmg'UZhYf'h\Y'gi Va ]gg]cb'XUhY
A Uf\_g'fYhi fbYX. '') # #&\$&&

 $FZWUaddwUf Wee aXS`ei Wde fa cgWef[a`e aX[`UdwSe[`Y V[X{Ug}fk [e cgS`f[X]WVZFZWefgVW] fe i [^Sbb^k fwUZ`[US^]`ai WwYWS`V W Y[`Wwd[`Y bd[`U[b^We fa, ZkVdaYWaUZW_ [US^S`V [eafab[U]`ai \wYWS`V _ WfZaVe XadYdag`Vi SfWd[`hWef[YSf[a`eZCgWef[a`e SdWVWe[Y`WW fa VWhWab S`V USbfgdWfZWefgVW] fe [`ZVWbfZ]`ai \wYWaX5ZSbfWde #&S`V #' z`$ 

#### 5ggYgga Ybh( 5gg][ ba Ybh(

GHJfhXUhY. '&+#+#&\$&&
Gi Va ]gg]cb'bchYg. 'Gi Va ]gg]cb'j ]U'A ccX'Y
8i Y'XUhY. '%#, #&\$&&
8YUX`]bY'Zcf'UVgc`i hY'ZJ]`. '') 'XUmg'UZhYf'h\Y'gi Va ]gg]cb'XUhY
A Uf\_g'fYhi fbYX. ''' %#, #&\$&&

 $FZWUaddWUf Wee aXS`ei Wde fa cgWef[a`e aX[`UdWSe[`YV[X]Ug'fk [e cgS`f[X]WWZFZWefgVW fe i [^Sbb'k fWUZ`[US^]`ai 'WWYWS`V W Y[`WWd[`Y bd[`U[b'We fa, SebWUfe aXTadWVWe[Y`-YWabZke[US^i W'\Z'aYY[`Y-YWaZWWUfd[US^S`V eW[e_ [U egdhWk [`fWdbdWfSf[a`zCgWef[a`e SdWVWe[Y`W fa VWhWab S`V USbfgdWfZWefgVW fe ]$ 

# 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

8 UHY	Hmd Y	7 cbhYbh	
K YY_"%" \$"A Um!"" >i bY	@YWhi fY	K YXbYgXUm @YWi fY %! =blfcXi Wjcb hc < mXfc[Yc`c[mif7\UdhYf`%L	
	@YWhi fY	H\i fgXUm @YWi fY &!!D\mg]WU`dfcdYff]Yg'UbX8UfWig@Uk'f17\UdhYf'&L	
		5gg][ ba Ybh%; i ]XUbW	
K YY_'&.'*'>i bY'!'%\$ >i bY	@YWhi fY	K YXbYgXUm @YWi fY" '!'HfUbgdcfhYei Uhjcbg'UbXghYUXmghUhY'Zck 'f17\UdhYf" Ł	
	@YWhi fY	H\ifgXUm @YWifY ('!5ei]ZYfghcfU[Y'UbX UVghfUWhcb]a dUWhgf7\UdhYf(Ł	
		5gg][ ba Ybh%; i ]XUbVW	
K YY_" . "% ">i bY"! "%+ >i bY	@YWhi fY	K YXbYgXUm @YWi fY') '!'; fci bXk UhYf'a cXY``]b[ Z bXUa YbhU`g'f17 \UdhYf') Ł	
	K cf_g\cd	H\i fgXUm 5gg][ ba Ybh&; i ]XUbW	
K YY_'(.'&\$'>i bY'!'&( >i bY	@YWhi fY	K YXbYgXUm @YWi fY + !! 8 f]``]b[ hYW.b]ei Yg`f17 \UdhYf`%%L`	
		@YWnffY', '!'5VghfUWnjcb'VcfY'XYg][b'UbX a U]bhYbUbWY'f17\UdhYf'% Ł	
	@YWhi fY	H\i fgXUm @YWh fY'- '!'K Y```\mXfUi `]Wg'UbX di a d]b[ 'HYghXYg][ b'fl'\UdHYf'+Ł	
K YY_').'&+'>i bY'!'% >i `m	@YWhi fY	K YXbYgXUm @YWi fY %\$ '! Di a d]b[ 'hYgh ]bhYfdfYhUh]cb f17 \UdhYf', Ł	
	K cf_g\cd	H\i fgXUm'5g][ ba Ybh'&'; i ]XUbVV	
K YY_'*.'( '>i `m'!', '>i `m	@YWhi fY	: @9L =6 =@+HMK 99? ` "BC "@97HI F 9G	
K YY_'+.'%%'>i `m!'%) >i `m	@YWhi fY	K YXbYgXUm @YWi fY %%! F YWXUf[ YžX]gWXUf[ Y UbX gi fZJWY k UhYf! [ fci bXk UhYf ]bhYfUWjcb f7 \UdhYf* Ł	
	@YWhifY	H\i fgXUm @YWhifY "%&"!"; fci bXk UhYf	

-		

## FYgci fW/g

#### DfYgWf]VYX F Ygci fWYg

7 ca dfY\Ybg]j Y'[ fci bXk UhYf`YWhi fY'bchYg`UfY'dfcj ]XYX`cb'h\Y`A ccX`Y`g]hY''`F Y`Yj UbhW\UdhYfg`Zcf`YUW\ k YY\_`]g`]bX]WUhYX`]b'h\Y`Wci fgY`gW\YXi `Y''`@YWhi fY`fYWcfX]b[ g`UbX`Dck Yfdc]bhdfYgYbhUh]cbg`k ]```U`gc`VY a UXY`Uj U]`UV`Y`cb`A ccX`Y`Ug'h\Y`Wci fgY`dfc[ fYggYg''`

### FYWca a YbXYX FYgci fWYg

FYWca a YbXYX'[fci bXk UhYf'hYl h/cc\_g.

- 5dd`]YX`<mXfc[Yc`c[mi!:cifh\'9X]h]cb`f&\$\$\\Vm7"K":YhhYf/diV`]g\YX`VmDfYbh]W\\`<U```!:cf`UVUg]W]bhfcXiV\\qcb"
- ; fci bXk UhYf`\mXfc`c[mf&\$\$) ŁVmHcXXž8"?"ž/ A Umgž@"K "K]YmžBYk >YfgYm"

J Uf]Uh]cbg`hc`gVXYXi `Y`k]``VY`Ubbci bWYX`cb`A ccX`Y"`H\Y`k cf\_g\cdg`UfY`a YUbhhc`]bhfcXi WY`h\Y Ugg][ ba Ybhg`UbX`dfcj ]XY`Ubgk Yfg`hc`ei Ygh]cbg`mci `a Umi\Uj Y`]b`fY`Uh]cb`hc`h\Y`Ugg][ ba Ybhg`UbX`h\Y

# 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 \UgʻUʻghUbXUfX``UhYʻgi Va ]gg]cb dYbUʻhmcZ

• )ı 'dYf'XUmž'Zcf'U``'UggYgga Ybhg'k \YfY'U'dYbU'hm'Udd`]Ygž'WUddYX'Uh'Zj Y'XUmg'f1%\$'\ci fgŁž'UZNYf k\]WX'U'gh XYbh'WUbbchgi Va ]h'Ub'UggYgga Ybhž'UbX'bc'dYfa ]hNYX'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 = b Zcfa Uh cb

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

: ]bU``Yl Ua g`]b`H&`&\$&&`k ]```VY`\Y`X`cb`]bY`VYłk YYb`%&h\`!`&) h\`5i [ i gh`&\$&&`]bWi g]j Yž`UbX gi dd`Ya YbhUfmYl Ua g`VYłk YYb`) h\`!`-h\`GYdhYa VYf`&\$&&`]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`HfUj Y``UffUb[ Ya Ybhg`Xi f]b[ `f\\]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 'Gh XYbh + bhfubYhflc[ ']b k ]h 'mci f'n + 8 'UbX dUggk cfXŁ '\hdg. # bhfubYh'W Yb[ "i bgk "YXi "Ui # gh 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]l. '9b[]bYYfg'5i glfU`]U'f95Ł'DfcZYgg]cbU`'9b[]bYYf'7ca dYlYbWm GlUbXUfX

Dfc[fUa '±bHybXYX'@YUfb]b['CiHWcaYg			
?bck `YX[Y`UbX'g_]```VUgY			
D9%"%7cadfY\Ybg]jYž'h\YcfmVUgYX'ibXYfgHJbX]b['cZh\Y'ibX d\mg]WJ`'gW]YbWYg'UbX'h\Y'Yb[]bYYf]b['ZbXUaYbHJ`g'Udd`]WJV`			
D9%"&"7cbWYdhi U``i bXYfgHUbX]b['cZh\Y'a Uh\Ya Uh]Wgžbi a Yf]N Wca di hYf'UbX']bZcfa Uh]cb'gW]YbWYg'k\]W\'i bXYfd]b'h\Y'Yb[]bY			
D9%" =b!XYdh\i bXYfghUbX]b[ cZgdYW]U`]ghVcX]Yg`cZ^	VW"	‰	