



## ARTS1271

< ]għc fmcZħY `DfYgYbh `H\Y `K cfX`g]bW`%- \$\$

HYfa `Cby` `#`&\$%-

7 ci fgY`Cj Yfj JYk

`GHUZZ7cbhUWih8YHUj`g`

`7cbj Ybcfg`

B Ua Y	9a Uj`	5j Uj`UVj]m	@cWUjcb	D\cbY
? Ua U`A UWYUb	? Ua U`a UWYUb4 i bgk "YXi "Ui	A cbXUmj" !( `cf`Vm Uddc]bha Ybh	A 6' **	- ' , ) ' **)

`@YWi fYfg`

B Ua Y	9a Uj`	5j Uj`UVj]m	@cWUjcb	D\cbY
F i h`6U]bh	f"VU]bh# i bgk "YXi "Ui			
B ]W_8ci a Ub]g	b"Xci a Ub]g4 i bgk "YXi "Ui			
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5bbY`C f6f]Yb	UbbY"cvf]Yb4 i bgk "YXi "Ui			
B ]Wc`Ug F Uga i ggYb	b"fUga i ggYb4 i bgk "YXi "Ui			
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D\cbY. `Z`\*%&`- ' , ) `:%\* , %

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9a Uj]: [\U`4 i bgk "YXi "Ui](#)

7 ci fgY'8YHJ]`g

7 fYX]hDc]bhr '\*`

Gi a a UfmicZ`hY'7 ci fgY

Gi V`YWh5fYU.: [efack

HcXUmž`bYk`g`Y`U`X`]`b`Y`g`U`F`Y`X`c`a` ]`b`U`H`X`V`m`h`Y`f`]`g`Y`c`Z`d`c`d`i` ]`g`h`Y`U`X`Y`f`g` ]`Y`8`c`b`U`X`H`f`i` a` d`ž`V`m`i`g`h`c`f`]`Y`g`c`Z`  
Y`h`b`]`W`U`b`X`f`U`W`]`U`h`Y`b`g`]`c`b`g`ž`d`c`]`h`W` ]`j` ]`c`Y`b`V`W`ž`k` U`f`U`b`X`V`č`b`Z`]`W`h`f`Y`g`d`Y`W`]`U`m`]`b`Z`c`f`a` Y`f`m`W`č`c`b`]`g`Y`X`f`Y`[ ]`c`b`g`ž`  
H`Y`d`c`g`h`V`č`X`k` U`f`d`Y`f`]`c`X`U`g`k` ]`h`Y`g`g`Y`X`h`Y`V`č`b`W`b`f`U`h`]`c`b`c`Z`[ `c`V`U`k` Y`U`h` ]`b`h`c`Z`Y`k` Y`f`U`b`X`Z`Y`k` Y`f`U`b`X`g`ž`  
5`g`]`U`g`f`Y`h` f`b`h`c`h`Y`V`W`b`f`Y`c`Z`k`c`f`X`d`c`k` Y`f`ž`h`Y`f`]`g`Y`c`Z`]`b`X`j` ]`X`i` U`]`g`a` U`b`X`U`m`d`Y`f`V`č`b`g`i` a` d`h`c`b`ž`U`b`X`U`W`]`g`g`  
c`Z`V`c`f`X`Y`f`g`f`a` c`g`h`f`Y`W`b`h`m`h`m`d`]`Z`Y`X`V`m`i`6`f`Y`I` ]`h`U`b`X`f`Y`Z` [ Y`Y`V`W`]`g`Y`g`ž`U`b`X`U`g`k` Y`Z`U`W`i` b`d`f`Y`W`X`Y`b`h`X`  
Y`b`j`]`f`c`b`a` Y`b`h`U`V`]`g`]`g`ž`Z` Y`Y`X`V`m`i`[ `c`V`U`W`U`d`]`h`U`" < c`k` W`U`b`h`V`]`g`h`c`f`m`Y`d`Y`I`d`U`]`b`g`i` W`U`d`Y`b`c`a` Y`b`U`3`

ž`< ]`g`h`c`f`m`i`c`Z`h`Y`D`f`Y`g`Y`b`h`ž`m`c`i` `k` ]`Y`I`d`c`f`Y`U`c`k` V`č`c`b`]`U`]`g`a` U`b`X`X`Y`W`č`c`b`]`n`U`h`]`c`b`ž`a` c`X`Y`f`b`]`m`i`U`b`X`h`f`U`X`]`h`c`b`ž`  
V`č`a` a` i` b`]`g`a` ž`Z`J`g`W`]`g`a` U`b`X` ]`V`Y`f`U`]`g`a` ž`h`Y`f`]`g`Y`c`Z`Z`Y`a` ]`b`]`g`a` g`ž`h`Y` ]`b`h`Y`b`g`]`Z`W`h`]`c`b`c`Z`[ `c`V`U`Y`I` W`U`b`[ Y`g`ž`U`b`X`  
Y`b`j`]`f`c`b`a` Y`b`h`U`X`Y`j`Y`c`d`a` Y`b`h`g` ]`b`h`Y`h`k` Y`b`h`Y`h` V`W`b`h` f`m`i`d`f`c`Z`c`i` b`X`m`i`g`U`d`Y`X`h`Y`d`f`Y`g`Y`b`h`K` Y`k` ]`Z`W`g`c`b`U`  
f`c`b`[ `h`k` Y`b`h`Y`h` V`W`b`h` f`m`i`h`a` Y`ž`U`a` Y`ž`g`h`U`f`h`]`b`[ `k` ]`h`h`Y` ;` f`Y`U`h`K` U`f`U`b`X`Y`b`X`]`b`[ `k` ]`h`h`m`Y`g`h`f`X`U`m`ž`h`c`Y`I`d`c`f`Y`  
V`]`g`h`c`f`]`W`U`V`č`b`W`d`h`g`i` V`U`g`U`g`V`č`b`h`i` ]`m`i`U`b`X`V`U`b`[ Y`ž`g`[ b`]`Z`W`U`b`V`W`U`b`X`V`č`b`h`c`j` Y`f`g`m`

K`c`f`\_]`b`[ `k` ]`h`h`V`]`g`h`c`f`]`U`b`g`k`V`c`g`d`Y`W`]`U`]`g`Y`c`b`h`Y`h`k` Y`b`h`Y`h` V`W`b`h` f`m`ž`m`c`i` `k` ]`Y`U`f`b`h`Y`g`\_]`g`c`Z`V`]`g`h`c`f`]`W`U`  
]`b`j`Y`g`h`[ U`h`]`c`b`U`b`X`]`b`e`i` ]`f`m`ž`h`c`V`č`a` Y`h`c`U`b`i` b`X`Y`f`g`h`U`b`X`]`b`[ `c`Z`V`c`k`h`Y`U`g`h`V`W`b`h` f`m`Y`I`d`U`]`b`g`ž`d`f`c`V`Y`a` U`h`j`n`Y`g`  
U`b`X`X`Y`Y`d`Y`b`g`i`c`i` f`i` b`X`Y`f`g`h`U`b`X`]`b`[ `c`Z`h`Y`d`f`Y`g`Y`b`h`

7 ci fgY`@YUfb]b[ `Ci hWča Yg

%`8`Y`g`W`]`V`Y`]`a` d`c`f`U`b`h`h`i` f`b`]`b`[ `d`c`]`b`h`g`ž`d`Y`c`d`Y`ž`]`X`Y`U`g`ž`U`b`X`X`Y`j`Y`c`d`a` Y`b`h`g`]`b`k`c`f`X`V`]`g`h`c`f`m`  
&`9`j`U`i` U`h`Y`U`b`X`V`č`b`h`Y`I`h`U`]`g`Y`d`f`]`a` U`f`m`i`g`c`i` f`W`g`

C i f'HYUWX]b[ 'ghfUHY[ m]g'hc 'YbWci fU[ Y'mci f'W]hWU`Yb[ U[ Ya Ybhk ]h 'Wci fgY'a UHYf]U`h'fci [ \ 'WUgg  
X]gW'gg]cbž]b'HYfUW]j Y'cb`bY'ei ]nnYgžk f]hYb'fYgdcbgYg'UbX'U'WUgg'h'gh'H\Y 'Wci fgY'k ]`U'gc '\Y'd'mci  
XYj Y'cd'mci f'fYgYUfVX 'UbX'k f]hYb'UbX#cf'j YfVU`g\_]`g'h'fci [ \ 'U'WUggfcca 'ZUW]hU]cb'YI YfW]gY'UbX'U  
fYgYUfVX 'YggUmik \]W'fYei ]fYg'mci 'hc'i bXYftU\_Y ]bXYdYbXYbh'fYgYUfVX 'cb'U'gdYW]Z]W'hd]W

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K f]h]b[ `9I YfW]gYg`f&Ł	) \$i	\$, #'\$' #&\$%- / '\$) #\$( #&\$%-	&ž( ž) ž*
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8YHJ]`g. Gh XYbhg`UfY`fYeI ]fYX`hc`Vf]b[ `U`df]a Ufm]gci fW`hc`WUgg`UbX`dfYgYbh]ž`WcbhYI hi U`]n]b[ `]h]b`hY k YY`\_g`fYUX]b[ g`Gh XYbhg`k ]`bYXX`hc`i d`cUX`U`dck Yf]c]bhig`]XY`hc`Hi fb]h]b`j ]U`A ccX`Yžk ]h`hY`gci fWž ]bWi X]b[ ]rg`dfcj YbUbW`fY[ "5i hcfž`Ufh]ghžk \YfY`di V]g\YXžXUHž`YhW": YYXVUW\_k ]`VY [ ]j Yb`h]fci [ \ Hi fb]h]b"

### 5XX]h]cbU`XYHJ]`g.

ž`hY`ž]fghh hcf]Už`dfYgYbhYfg`k ]`VY`Ugg][ bYX`Zcf`hY`fYghcZgYa YghYf`" ž]g`Ubh]WdUH`X`h`Uh]k c`hc`h`fYy gh XYbhg`k ]`dfYgYbh]hY]f`bYk gdUdYf`gci fW`YUW`k YY`" D`YUgY`fYžf`hc`YI Ya d`Ufg`cb`A ccX`Y"

HUg\_. `6f]b[ `]b`U`bYk gdUdYf`f]c`f`a U[ Un]bYŁ`gci fW`fY`UH`X`]b`gca Y`k Um]c`h`Y`h`hcf]U`hcd]WUUbX`hU`\_`UVci h ]h`ž`bc`a`cfY`h`Ub`ž]`Y`a ]bi hYgž`dfcj ]XY`WcbhYI hUbX`WcbhYbhiUbU`mg]g`K \]Y`mci `a Um]cbhU`k Um]g`VY`UV`Y hc`]XYbh]žm]hY`Ui hcfž`mci `WU`b`dfcj ]XY`ch`Yf`di V]WU]h]cb`XYHJ]`g`–`bUa Y`cZ`hY`bYk gdUdYfž`XUHž`c`WU]h]cb cZ`hY`Ufh]WY`#gYW]cb ]b`hY`bYk gdUdYf`Ug`U`k \c`Y"

H\]g`]g`Ub`]bZ`fa U`dfYgYbhU]cb/`mci `Xc`bchbYXX`hc`dfYdUfY`U`k f]hY`b`dUdYf`fgca Y`a UmidfYžf`hc`Xc`gčŁ –U`žYk`dc]bh]h`Uh]mci `WU`b`gdYU`\_`hc`k ]`gi ž]W"

Gca Y`ei Ygh]cbg`mci `a Um]Ug`\_`cZ`hY`gci fW`]bWi XY`k \Uh]g`]hUVci hž`<ck`XcYg`]h`i`a ]bUH`h`Y dYf]cX`i bXYf`Wcbg]XYfU]h]cb3`K \Uh]X]h`Y`gci fW`YbVŁi fU[ Y`mci `hc`h]b`\_`UVci hž`<ck`a ][ \h]hVY`i gYX`Ug U`df]a Ufm]gci fW`]b`U`k ]XYf`]\]g]c]f]m]cZ`hY`dYf]cX3

Mci `WU`b`]bhYfdYh]hY`gci fW`g`fY`U]h]cb`hc`h`Y`dYf]cX`#`hcd]Wi bXYf`]bj Ygh] [ Uh]cb`ck Yj Yf`mci `k ]g\": cf YI Ua d`Yž]Zk Y`UfY`cc\_]b[ `Uh]k`cfX`K`Uf`ž`mci `a Um]W`ccgY`hc`X]gW`gg`h`Y`Y`hY`fg`dU[ Yg`Zc`ck ]b[ `U dUfh]W`Uf`mia`ca`Yb]c]i`g`h`fb]b[ `dc]bh]b`h`Y`K`Uf`cf`mci `a Um]W`ccgY`hc`YI Ua ]bY`ck`h`Y`k`ca`Yb`g`dU[ Yg cZU`a U`cf`bYk gdUdYf`k`YfY`UXXfYgg]b[ `h`Y`K`Uf`f]c`f`bc]h`" ž]g`U`[`ccX`]XYU`hc`Vfck`gY`h]fci [ \`U`dUfh]W`Uf YX]h]cb`cZU`a U`cf`bYk gdUdYf`hc`[ YhU`Uf[ Yf`gYbgY`cZ`hY`dYf]cX`UbX`h`Y`bYk gdUdYf`g`[ YbYf]WZYU`h`fYg` Ø\]g`]g`YUg]Yf`hc`Xc`k ]h`gca Y`cb`]bY`d`UhZ`fa`g`h`Ub`ch`Yfg07`Uf]c]cbg`UfY`U`gc`UWVW`d`hU`Yž`UbX`d`lc`hc ZYU`h`fYg"



@Yb[ h. '9I YfW]gY'5.; \$\$'k cfXg'#9I YfW]gY'6. '%\$\$\$'k cfXg

8YHU]g. 'Gh XYbhr]Wca d'YHY'rk c'fYgdcbgYg'hc'hi'hc'f]U'fYUX]b[ gZ'UbU'm]b[ 'U'df]a Ufmgci fW' ]b'hY''[ \hcZ U'gYVcbXUfmgci fW''C bY' ]g', \$\$'k cfXgZ'cbY' ]g:'%\$\$'k cfXg'fk cft\ '&\$i' 'UbX'' \$i' 'fYgdYVW]j Y'mt': YYXVUW\_ ]g'j ]U' ]bX]j ]Xi U'Wca a YbhZ'ca 'mci f'hi'hc'fZ'j ]U'Hi'fb]h]b"

5XX]h]cbU'XYHU]g.

H\YgY'YI YfW]gYg'Wcbgh]hi'HY'hY'Z'fghghYdg'U'cb[ 'hY'fcUX'hc'k'f]h]b[ 'mci f'fYgYUfW\ YggUm]b'hc'c'Ymk Umg.

%'6mXYj Y'cd]b[ 'mci f'g\_]`g' ]b'Zcfa i'U'h]b[ 'Ub'Ub'gk Yf#Uf[ i a Ybh

&"'h'YI'HYbX]b[ 'UbX'fYZ]b]b[ 'mci f'fYgYUfW\ 'g\_]`g"

: cfVch'hYgY'YI YfW]gYgZ'mci'k ]`VY'a Uf\_YX'cb'mci f'UV]]mhc'Z'ck' ]bghfi W]cbgZ'UbX'hc'i'gY'hY'hY'hihc' fYgdcX'Z'`m-Vi hWcbW]gY'm-'hc'hY'ei Ygh]cb"Mc'i'UfY'bchYI dYVW'X'hc'i bXYfU\_Y'UbmYI fU'fYUX]b[ "

K f]h]b[ '9I YfW]gY'5.; UbX\ ]Z'HfUX]h]cb'UbX'A cXYfb]h]mi

6gW A UfW\ ; ZVm(da '...)

Gi Va ]h]mci f'Ugg][ ba Ybh'hc'hi'fb]h]bZ'i bXYf'mci f'hi'hc'f'g'bUa Y"

H\]g'YI YfW]gY' ]g' ]b'hc'c'dUfmg'U', \$\$'k cfX'fYgdcbgY'hc'hY'ei Ygh]cb/UbX'U' ]VfUfmi fYgYUfW\ 'YI YfW]gY" F YZ'fYbW]b[ 'a i ghVY' ]bWi XYX'UbX'hY'Zc'hc'hY'#]V' ]c[ fUd\ma YhcX'g\ci 'X'VY'i gYX"GYY'` [\h\]dg.#gh XYb\]hi'bgk "YXi "Ui #c'c'hc'hY'!V\]V' \]c\[ fUd\m'c'f'c'l'Zc'fX'fYZ'fYbW\]b\[ !gmghYa](#)

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F YUX'hY'gY'YVW]cbgZ'ca 'hY'df]a Ufmgci fW\ 'A "?"; UbX\]Z: [ V E i SdS%'-\$- 'fcb'a ccX'Y'

5bX'hY'gY'WcbXUfmgci fW\ 'F cVYfhiMci b[ Z'; UbX\]g'7ci bhYf]A cXYfb]h]mZ'BaefUa'a` [S[e\_ , 3` : [efadUS^ ;' fdaVgUf]a` fC] Zc'fX.'6'UW\_k Y`Z&\$\$%Z'dd"" %\*!' ' ( 'fh] ]g'k Ug'gYhZc'f'hi'hc'f]U'&L"

h', \$\$'k cfXg'fZ'# '%\$i' lZ'k f]h]U'fYgdcbgY'hc'hY'Z'ck' ]b[ 'ei Ygh]cb.'K \mUbX'\ck 'X]X'; UbX\]g'dc' ]h]Wg a Yf[ Y'hY'fUUX]h]cbU'UbX'hY'a cXYfb3'8]gW gg'k ]h'fYZ'fYbW'hc'Vch'hY'df]a UfmUbX'gYVcbXUfmgci fW' ]mci 'a i ghfYZ'fYbW' mci f'k cf\_Z'Y" "k ]h'Zc'hc'hY'g'UbX'V]V' ]c[ fUd\m' F YZ'fYbW'g'UfY'bch]bWi XYX' ]b'hY k cfX'Wci bh'

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@]VfUfmF YgYUfW\

I ]g]b[ 'hY'' ]VfUfmW]h]U'c[ i Y'UbX' ]hg'cb' ]bY'gYUfW\ Yb[ ]bYZ'Z]bX'UbX' ]gh]Z]j Y'chY'f'gci fW'g'hUhUfY'fY'Yj Ubh'hc'h]g'ei Ygh]cbZ'k \]W\ Wci 'X'Y'd'mci 'dfcj ]XY'U'fYgdcbgY'"Mci 'Xc'bch\Uj Y'hc'XYgW]VY'hY'gci fW'gZ'f'gh' ]gh'hYa' i ]g]b[ 'hY'Zc'fa UhXYgW]VYX'Uh' [\h\]dg.#gh XYb\]hi'bgk "YXi "Ui #\]V' \]c\[ fUd\m'c'f' \]gh'fYZ'fYbW\]g"](#) H\Y di fdcgY'cZ'h]g'YI YfW]gY' ]g'hc'XYa'cbghfU'h' mci f'UV]]mhc'fYgYUfW\ i ]g]b[ 'hY'' ]VfUfmW]h]U'c[ i Y'UbX'hc'Z]bX Uddfcd]U'h' a U'h]f]U'g"

K f]h]b[ '9I YfW]gY'6. 'K \mX]X'hY'm\_]`3'8YVUhY'g'UVci h'hY'<c'c'W]i gh

6gW 5df] ) žVm( da

Gi Va ]hmc i fUgg][ ba Ybhic`hi fb]h]bži bXYf`mci f`hi hc`f`g`bUa Y"

H\]g`Ugg][ ba Ybh]g`]b`tk c`dUfhtg. `U`h`Yg]g`ghUHy`a Ybž`UbX`U`df]a Ufmigci fW`UbU`mg]g"

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8Ub]Y` ; c`X\U[ Yb`UbX`7\]f]g]hd\Yf`6fck b]b[ žk \cgY`k f]h]b[ g`k Yfy`gYhZcf`hi hc`f]U`X]gW gg]cb`]b`k YY\_) ž  
\Uj Y`tk c`j YfmX]ZYfYbh]b]hYfdYfU]h]cbg`cZk \UhW]i gYX` ; Yfa Ubh`hc`dUfht]W]dUHy`]b`h`Y`YI hYfa ]bU]cb`cZ  
>Yk g`]b`B`Un] ; Yfa Ubm` ; c`X\U[ Yb`gYg`\_]`Yfg`Ug`k`j`]b[ `YI YW h]cbYfg`UbX`6fck b]b[ `gYg`h`Ya `Ug  
`cfX]bUfma Yb`"

F YUX]b[ g`Zca `GYW`bXUfmGci fW`g.

8Ub]Y`>cbU\ ; c`X\U[ Ybž: [f`Wde l [^f` Y` 7j WUgf[a` Wde`fBYk`Mcf\_`5`ZfYX`5`"? bcZ`%` -`\*`L`W`"%` `fUbX  
bchYg`"

7\]f]g]hd\Yf`6fck b]b[ žA dV[ Sdk ? W , DW`W`h`W`Ba`f]UW4SffS`fa` #` #`S` V`fZW8[ S`E`a`g]f[a` [ `Ba`S` V  
fBYk`Mcf\_`<UfdYfDYfYbb]U`ž`%` -` `L`W`"%` `fUbX`bchYg`"

7\ccgY`Y]h`Yf` ; c`X\U[ Yb`cf`6fck b]b[ `UbX`Zcfa`i`Uh`U`h`Yg]g`ghUHy`a Ybž`cf`XYgW]d]h]cb`cZ`h`Y]f`Uf[ i`a`Ybh  
fbc`a`cfY`h`Ub`h`fY`cf`Zci`f`gYbh`bW`g`L`H`Yb`"]gh`h`fY`WYUf`gi`V!Uf[ i`a`Ybh`Zci`bX`]b`h`Y`gci`fW`]b  
gi`ddcfhcZ`h`Y`h`Yg]g`ghUHy`a Ybh`f`gh`Vi`"Y`hdc]b]h]g`"

DUfhHk c

F YUX`h`Y`Df]a UfmGci fW`.

: Y]l` @UbXUi ž`8]Ufm`]b`9fbgh?`YYž`K` ]`]`8fYggYb`UbX`J`c`\_Yf`F`]Ygg`fYXg]Z`F`ZW9`aaV`A`V`6`Ske,`F`ZW  
: `a`@U`Sgef`Se`e`W`W` Tk` [fe`B`W`b`W`f`S`f`ade`S` V`4`kef`S` V`W`ž`ž`B`Yk`Mcf\_`?`cbY`W`m`UbX`?`cbY`W`m`ž`%` -` ,`ž`dd`  
,` ,`!`\$`\*`"

K` ]h`fY`ZYfYbW`h`c`V`ch`h`Y`df]a Ufmigci fW`UbX`mci f`W`cgYb`gYW`bXUfmigci fW`ž`YI`d`cfY`h`Y`YI`h`Ybhic  
k`\]W`@UbXUi`g`X]Ufmdfcj`]XYg`Yj`]XYbW`Zc`f`h`Y`h`Yg]g`di`h`Zc`fk`Uf`X`Vm;`c`X\U[ Yb`cf`6fck b]b[ "`h`ch`Yf  
k`cfXgž`V`UgYX`cb`mci`f`fYUX]b[ `cZ`@UbXUi`g`X]Ufmž`k`Ug`\Y`U`k`j`]b[ `YI`YW`h]cbYfž`cf`Ub`cfX]bUfma`Ub3

H`Y`Z]bU`k`cfX`Wci`bhfZcf`V`ch`dUfht]g`l`ci`X`VY`%\$\$\$`k`cfXg`fZ`#`%\$i`L`Mci`f`Ugg][`ba`Ybh]g`ci`X`VY  
dfcdYf`mfY`ZYfYbW`X`"F`YZfYbW`g`UfY`bch]bW`XYX`]b`h`Y`k`cfX`Wci`bh`Mci`a`i`gh`Uj`Y`U`V]V`c[`fUd`m]b`h`Y  
W`ffY`W`h`Zcfa`Uhi`g]b[ `h`Y`Zcfa`Uhi`XYgW]VYX`Uhi`[h\]dg`#gh`XYb\]hi`bgk`"YXi`"Ui`#/V`\]c\[`fUd`m\]c\]f\]`gh`fY`ZYfYbW`g`  
UbX`i`gY`Zc`fbch`g`U`W`W`cfX\]b\[ `h`h`Y`CI`Zc`f`gmg\]h`a`ž`XYgW\]VYX`Uhi`\[h\\]dg`#gh`XYb\\]hi`bgk`"YXi`"Ui`#`c`b`ch`Y`!  
V\\]V`\\]c\\[`fUd`m\\]c\\]f\\]c\\]`Zc`fX\\]fY`ZYfYbW\\]b\\[`\\]gmg\\]h`a`\]\(#\)](#)

Hi`fb]h]b`gY`h]b[ .`H\]g`Ugg][`ba`Ybh]g`gi`Va`]hYX`h`fci`[`\`Hi`fb]h]b`UbX`gh`XYbh]g`W`Ub`gY`Y`Hi`fb]h]b`g]a`]Uf]m  
fYdcfhtg"

5ggYgga`Ybh`. `C`b`]bY`E`i`]nnYg

GHUfhXUHy. `B`ch5`dd`]W`V`Y

8YhU]`g. `6`UgYX`cb`h`Y`cb`]bY`W`UggYg`h`Uh`Zc`W`g`cb`g][`b]Z]W`b`hdc`]h]W`]X`Yc`c[`]Ygž`cf`]ga`g`ž`gh`XYbh]g



Wca d'YH' U'g\cfhei ]n'k YY\_m'H\Y'ei ]n' ]g' ]bh'fUW'j Y' UbX' ZYXVUW\_ ]g' ]a a YX]UH'"

5XX]h]cbU'XYHJ]g.

H\Y'cb']bY'ei ]nnYg'UfY'Ya VYXXYX' ]bhc' h\Y' "gga g''YVW'i fY'gYf]Yg'cb'A ccX'Y''9UW' "gga g''YVW'i fY' ]g'Vfc\_Yb  
i d' ]bhc' gY[ a Ybhz'Uh'h\Y'YbX'cZk \ ]W' ]g' U'a i 'h'd'Y'W'c]W' 'ei Ygh]cb''Mci 'W' b'k Uh'W' h\Y' 'YVW'i fY' gY[ a Ybhz'  
a i 'h'd'Y' ]ja Ygz'Vi hcb'mi[ Yh'hc' Ub'gk Yf'h\Y' 'ei Ygh]cb'cbW'' : YXVUW\_ ]g' ]a a YX]UH''K Y' fY'Wca a YbX' h\Uh  
mci 'k cf\_ 'h'fci [ \ 'h\Y' "gga g''YVW'i fY'g'cb' U'k YY\_m'VUg]g'z' Ug'h\Y' W'cb'h'bh]g' W' ]VfUH'X' 'hc' h\Y' 'YVW'i fY'g' UbX'  
h' hc'f]U'g"

Hi fb]h]b'gYH]b[ . H\ ]g' ]g' bchU'Hi fb]h]b'Ugg][ ba Ybh

5ggYgga Ybh( . 7'Ugg'HYgh

GhUfhXUH' . &- #\$( #&\$%

@Yb[ h. '%\$\$\$'k cfXg

8YHJ]g. 'Gh XYb'g'Wca d'YH' U' ]ja YX'cb']bY' 'H'gh]b' h\Y' ]bU'k YY\_ 'cZ'h\Y'W'ci fgYz'fYgdc'bX]b[ 'hc' a i 'h'd'Y'  
W'c]W' 'ei Ygh]cbg'UbX'k f]h]b[ 'cbY'g\cfh'fYZYW'j Y YggUm'Gh XYb'g' fY'W'j Y' U'a Uf\_ 'UbX'W' b' W'cb'gi 'hk ]h'  
h\Y'f'h' hc'f'z'f'z' f'h\Y'f'ZYXVUW\_ "

5XX]h]cbU'XYHJ]g.

H\Y'WUgg'h'ghk ]''VY'cb']bY' UbX'k ]''fYei ]fY'mci 'hc'dfcj ]XY'U'W'cb]W'gY'fYgdc'bgY'cZUddfcI "'%\$\$\$'k cfXg'hc'  
cbY'cZU'' ]ghcZei Ygh]cbg'fYZYW'j]b[ 'cb'g][ b]z'W' b'h'h\Ya Yg' ]b'h\Y' 'cb[ 'tk Yb]Y'h' W'bh' fmfk cf'h' &\$' E' H\Y'  
H'ghk ]''VY'fY'UgYX'cbz'UbX'a i ghVY'Wca d'YH'X'k ]h]b' U' 'k c' \ci f'k ]bXck'cb'A cbXUmz'5df]'&-

Hi fb]h]b'gYH]b[ . H\ ]g' ]g' bchU'Hi fb]h]b'Ugg][ ba Ybh





F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

5`fYUX]b[ g`UfY`dfcj ]XYX`cb`A ccX`Y"

F YWca a YbXYX`F Ygci fWg

[7""5""6UmnřDW\\_S\] \[ Y fZW? aVWd l adVi #+ " Ž\\$ # ' , 9`aTS^5a` ` Wfja` e S` V 5a\\_bSdea` ež@cbXcb.  
K \]Ym6`UW\\_k Y`ž&\\$% " `5j U\]UV`Y`\]b`hY`"VfUfmUg`Ub`YVcc\\_"`](#)

7ci fgY`9j U`i Uh]cb`UbX`8Yj Y`cda Ybh

Gh XYbhZYXVUW\_k ]`VY`gci [ \hj ]U`A m9l dYf]YbW`"K Y`i gY`gh XYbhZYXVUW`hc`]a dfcj Y`hY`Wci fgY  
WcbhYbhUbX`ghfi Wñ fy"

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

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

Ẓmci `YbWci bhYf`U`dfcV`Ya `k \Yb`U`H`Ya dh]b[ `hc`gi Va ]hmc i f`Ugg][ ba YbhHfci [ \`Hi fb]h]bžd`YUgY  
H`Yd\cbY`9I H`fbU`Gi ddcfhcb`-` , ) `` `` ` %cf`Ya U]`H`Ya `cb`YI H`fbU`H`hgi ddcfh4 i bgk "YXi "Ui ``Gi ddcfh  
\ci fg`UfY` , .\$\$Ua `--`%\$. \$\$da `cb`k YY\_XUmg`UbX`- . \$\$Ua `--` ) . \$\$da `cb`k YY\_YbXg`fI \*) `XUmg`U`mYUfL` Ẓmci  
UfY`i bUV`Y`hc`gi Va ]hmc i f`Ugg][ ba YbhXi Y`hc`U`ZU`i`hik ]H`Hi fb]h]b`mci `a UmiUdd`miZc`f`Ub`YI H`bg]cbžVi hmc i  
a i ghfYH]b`mci f`h]W`Yhbi a VYf`Zca `9I H`fbU`Gi ddcfhfU`cb[ `k ]H`Ubmch`Yf`fY`Yj UbhXcW a YbHgE`hc  
]bWi XY`Ug`Yj ]XYbW`hc`gi ddcfhmci f`YI H`bg]cb`Udd`jW]h]cb" Ẓmci `Ya U]`9I H`fbU`Gi ddcfhmci `k ]`

## 5 WUXYa ]W<c bYghmUbX`D`U[ ]Uf]ga

D`U[ ]Uf]ga `]g`i g]b[ `hY`k cfXg`cf]XYUg`cZchYfg`UbX`dfYgYbh]b[ `hYa `Ug`mci f`ck b" `hWUb`hU`Y`a Ubm  
Zcfa gž`Zca `XY`]VYfUHY`WXYU]b[ `hc`UWV]XYbhU`mW`dm]b[ `Zca `U`gci fW`k ]h`ci hUW\_bck`YX[ Ya Ybh`

I BGK `[ fci dg`d`U[ ]Uf]ga `]bhc`hY`Zc`ck ]b[ `WUHY`[ cf]Yg.

7 cdm]b[ .`i g]b[ `hY`gUa Y`cf`j Yfmg]a ]Uf`k cfXg`hc`hY`cf][ ]bU`hYI hcf]XYU`k ]h`ci hUW\_bck`YX[ ]b[ `hY`  
gci fW`cf`i g]b[ `ei chU]cb`a Uf\_g" `H\]g`U`gc`Udd`]Yg`hc`]a U[ YgžUfhUbX`XYg][ b`dfc`YWgžUg`k Y`Ug  
dfYgYbhU]cbg`k \YfY`gca YcbY`dfYgYbh]g`UbchYf`g`]XYUg`cf`k cfXg`k ]h`ci hWYX]h`

hUddfcdf]UHY`dUfUd`fUg]b[ .`7`Ub[ ]b[ `U`ZYk `k cfXg`UbX`d`fUgYg`k \]Y`a cghmifYU]b]b[ `hY`cf][ ]bU`  
ghfi W`i fY`UbX`#`f`dfc[ fYgg]cb`cZ]XYUg`cZ`hY`cf][ ]bU`ž`UbX`]bZcfa U]cb`k ]h`ci hUW\_bck`YX[ Ya Ybh`H\]g`U`gc  
Udd`]Yg`]b`dfYgYbhU]cbg`k \YfY`gca YcbY`dUfUd`fUgYg`UbchYf`g`]XYUg`cf`k cfXg`k ]h`ci hWYX]hU`bX`hc  
d]YW]b[ `hc[ YhYf`ei chYg`UbX`dUfUd`fUgYg`]bhc`U`bYk `k \c`Yž`k ]h`ci hUddfcdf]UHY`fYZYfYbW]b[ "

7 c`i g]cb.`k cf\_]b[ `k ]h`chYfg`Vi hdUgg]b[ `cZ`hY`k cf\_]Ug`U`dYfgcb`g`]bX]j ]Xi U`k cf\_]7 c`i g]cb`U`gc  
]bWi XYg`dfcj ]X]b[ `mci f`k cf\_]hc`UbchYf`gh`XYbhVYZc`fY`hY`Xi Y`XUHYž`cf`Zc`f`hY`di fdcgY`cZ`hY`a

- i bXYfghUbx'mci f'f][ \hg'UbX'fYgdcbg]V]h]Yg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[ ]Uf]ga ž'Wc'dmf][ \hž' BGK 'Gh XYbh7cXY'cZ7cbXi W'Ubx'5W'W'dhUV'Y'I gY'cZ I BGK '⇒H'F'Ygci f'W'g'Dc`]W'h
- VY'Uk UfY'cZ'Y'ghUbxUfXg'cZVY\Uj ]ci f'YI dY'W'X'cZYj Yfmcby']b'h'Y'I BGK 'W'a a i b]m
- 'cW'W'h'gYfj ]W'g'UbX' ]bZ'fa U]cb'UVci hl BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZ'Y'gY'UfY'Ug'k ]''VY'ZJa ]]Uf'hc'mci ž'c'h'Yfg'k ]''VY'bYk "; U]b]b[ 'U'gc`]X'i bXYfghUbx]b[ 'cZU''h'Y fY'UH'X'UgdY'W'g'cZ9@G9'k ]''\Y'd'mci 'a U\_Y'h'Y'a cghcZmci f'gh X]Yg'Uhl BGK ""

[\h'hd.##gi V'Y'W'i \]X'Yg" \]VfUfm'i bgk "YXi "Ui #' \]gY#\]Vci h' \]gY](#)

5 WUXYa ]WbZcfa Uhcb`

: cfYggYbh]U`ghi XYbh]bZcfa Uhcb`fY`Uh]b[ `hc.

- fYei Yghg`ZcfYI hYbg]cb/
- `UhY`gi Va ]gg]cbg`[ i ]XY`]bYg/
- fYj ]Yk `cZa Uf\_g/
- I B GK `<YU`h`UbX`GUZY`midc`]WYg/
- YI Ua ]bUh]cb`dfcVWXi fYg/
- gdYW]U`Wc]bg]XYfUh]cb`]b`hY`Yj Ybhcz]`bYgg`cf`a ]gUXj Ybh fY/
- ghi XYbhYei ]hmUbX`X]gUV`]`hm/
- UbX`chYfYggYbh]U`UWUXYa ]W]bZcfa Uh]cbz`gYY

[\hdtg.#k k k "Uftg"i bgk "YXi "Ui #W ffYbhghi XYbh\]bZcfa Uhcb`dfc\]Wc`g!\[ i \]XY`\]bYg#](#)

⇒ U[ Y`7 fYX]h

D]WJggcž; i Yfb]WJž%- ' + "K ]\_a YX]U`Wc`a a cbg"

7F ⇒ CG

7F ⇒ CG`Dfcj ]XYf`7cXY.`\$\$\$- , ;