



7ci fgY`Cj Yfj]Yk

GHJZ`7cbHJW`8YHJ]`g

7cbj Ybcfg

B Ua Y	9a Uj`	5j Uj`UVj]m	@cWjhcb	D\cbY
>UbY`8Ybb]g	^UbY"XYbb]g4 i bgk "YXi "Ui	5ddc]bha Ybfg Uj Uj`UVY`j]U		

cb'mci f'k cf_žk]h'U[YbXU']h'a g'UXXYX'Vmimci f':]Y'X'9Xi WJhcf''5hd'UW'a Ybhg'k]h'bc'gcWJU'k cf_
gi dYfj]g]cb'cb!g]h'žgh XYbhg'dUfh]V]dUH']b'Ub'9I h'fbU'Gi dYfj]g]cb'; fci d'Y'X'Uhih'Y'i b]j Yfg]m
Zcfb][\hmi'h'fci [\ci h'h'Y'd'UW'a Ybh'

" "'Mci f'XU]m8]UfmUbX'k YY_mDfUW]W'>ci fbU'k \]W'W'cb]bi Y'UW'cgg'DUfh5'UbX'DUfh6'cZ'h'Y
d'UW'a Ybh'

'("'Mci f':]bU'D'UW'a YbhF YdcfhXYj Y'cdYX']b'W'cbgi 'fU]cb'k]h'h'Y':]Y'X'9Xi WJhcf''

'*"' 'h'Y [fU]cb'GYa]bUfg'Uhi b]j Yfg]mXi f]b['d'UW'a Ybh'žk \Yfy'k cf_'k]''VY'gYh'UbX'h'a Y'U'c'W'h'X'Zcf']h'g
W'ca d'Y]cb''

5ggYgga Ybh

⊕Zcfa U}cb'UVci h⊕hY[fU}cb'GYa]bUfg'k]`VY'dfcj]XYX'cb'A ccX`Y"

8YHJ]g.

5`fUb[Y`cZ]bHfUWfj Y`UbX`k f]HfYb`WUgg`UWfj]HfYg`fYWfj Y`j YfVU`ZYXVUW`]b`WUgg`Zfca`hY`h`hcfz`UbX`UfY`fUfX`cj YfU`gUhgZJWcfmcf`i`bgUhgZJWcfm`

5XX]H]cbU`XYHJ]g.

H\Y`bHf[fUfj Y`GYa`]bUfg`Zcf`GC`7`K``\$%`D`UWfa`Ybhk`j`VY`Y`X`cb`:`f]XUm(`UbX`%%`>`i`bY`&`\$`&`%`

5ggYgga`Ybh`.`D`UWfa`Ybh8]UfmUbX`>`ci`fbU`

8YHJ]g.

H\Y`D`UWfa`Ybh8]UfmUbX`>`ci`fbU`U`ck`hY`gh`XYbhfc`fYZYWfcb`hY]f`XU]mUWfj]HfYg`UbX`hc`a`Ud`hY]f`XYj`Y`cda`YbhUg`U`dfUWf]H]cbYf`Xi`f]b[`hY`d`UWfa`Ybh`9`bh]Yg`]b`hY`8]UfmUbX`>`ci`fbU`UfY`hc`VY`g`hcfYX`Vm`hY`gh`XYbhUbX`a`UmVY`j`]Yk`YX`Vm`hY`:`]Y`X`9`Xi`WUf`UbX`hY`@]U]gcb`Hi`hcf`Zcf`hY`di`fdcgYg`cZ`hUWf]b[`UbX`Y`Ufb]b[`"

5ggYgga`Ybh(`.`9`bX`cZD`UWfa`YbhF`Ydcfh

8YHJ]g.

H\Y`9`bX`cZD`UWfa`YbhF`Ydcfh]g`Wca`d`Y`H`X`i`g]b[`hY`gdYWf]ZYX`hY`a`d`U`h`U`j`U]UV`Y`cb`A`cc`X`Y`"K` \Yb`dfYdUf]b[`hY`:`]bU`D`UWfa`YbhF`Ydcfh`hY`gh`XYbhg`l`ci`X`XfUZh`Wcb`hY`bhUbX`hY`b`X]gW`gg`k`]h`hY]f`:`]Y`X`9`Xi`WUf`f`]b`U`X`j`UbVW`cZ`hY`Xi`Y`X`U`h`"b`d`f`Y`d`U`f]b[`hY]g`XcW`a`Ybh`gh`XYbh]g`YUf]Yf`d`UWfa`Ybh`XcW`a`Ybh]H]cb`g`l`ci`X`VY`fY`ZY`fY`b`W`X`"H\Y`9`bX`cZ`D`UWfa`YbhF`Ydcfh]g`l`ci`X`]bWf`XY`V`ch`hY`Wcb`hY`bh`Zfca`hY`A`]X]D`UWfa`YbhF`Ydcfh]Ug`k`Y`U`g`b`Y`k`]bZ`f`a`U]cb`fY[`UfX]b[`dfc[`fYgg`a`UXY`]b`hY`gY`Wcb`X`\`U`Z`Z`hY`gh`XYbh]g`Y`Ufb]b[`[`c`U`g`UbX`#`f`H]g`_`UfY`U`h`fYX`U`h`hY`a`]X]d`UWfa`Ybhdc]b`h`hY`9`bX`cZD`UWfa`Ybh`F`Ydcfh]g`l`ci`X`]bWf`XY`U`X`Y`g`W]d]H]cb`cZ`l`ck`hY`mk`YfY`gi`Vg`Yei`YbhmiUWf]Yj`YX`"

H\Y`:`]Y`X`9`Xi`WUf`U`gc`XfU`Z`g`U`g`Y`Wf]cb`cZ`hY`fYdcfhk` \]W`Z`f`a`g`d`Uf`h`cZ`hY`gh`XYbh]g`ZYXVUW`cb`d`UWfa`Ybhdfc[`fYgg`"H\Y`9`bX`cZD`UWfa`YbhF`Ydcfh]g`fYj`]Yk`YX`Vm`hY`@]U]gcb`Hi`hcf`k`]h]b`h`c`k`YY`g`cZ`"

5 hYbXUbW F Yei]fYa Ybhg

Gh XYbhg UfY ghfc b [mYbWci fU[YX'hc UHh'bx'U''WUggYg'UbX'fYj]Yk ''YWhi fY'fYWcfX]b[g"

7 ci fgY'GWXYXi `Y

[J \]Yk WUgg'ha YhUVY](#)

H]a YhUV`Y`

8UhY	HmdY	7cbhYbh
K YY_%'' %A Um!'(' >i bY	GYa]bUf	<p>H\Y'GYWcbX'bhY[fUhj Y'GYa]bUf'Zcf'GC 7 K ' \$% @Yj Y'' 'D`UWfa Ybhk]''VY`Y`X'cb': f]XUm(' >i bY &\$&%Zca '-. \$\$`\ci fg!'% \$\$`\ci fg"</p> <p>H\Y'GYa]bUf'k]''VY`Y`X']b`hY'7 YbhU''@YWhi fY 6`cW`f7 @6E'+"</p> <p>H\]g`]g`]bhYbXYX'hc`VY`U'gYa]bUf'k]h`ZUW!hc!ZUW UHh'bxUbW''5 b'cb']bY`UHh'bxUbW`cdh'cb'k]''VY Uj U]UV`Y`Zcf'gh XYbhg'k \c`XYa cbghUHh'U'bYXX'hc UHh'bx']b`h]g'a cXY''D`YUgY`WcbhUWh'hY'7 ci fgY 7cbj Ybcf"</p> <p>5hYbXUbW`]g'a UbXUhcfm'</p>
K YY_`&.`+'>i bY!'%% >i bY	GYa]bUf	<p>H\Y H\]fX'bhY[fUhj Y'GYa]bUf'Zcf'GC 7 K ' \$% @Yj Y'' 'D`UWfa Ybhk]''VY`Y`X'cb': f]XUm%%>i bY &\$&%Zca '-. \$\$`\ci fg!'% \$\$`\ci fg"</p> <p>H\Y'GYa]bUf'k]''VY`Y`X']b`hY'7 YbhU''@YWhi fY 6`cW`f7 @6E'+"</p> <p>H\]g`]g`]bhYbXYX'hc`VY`U'gYa]bUf'k]h`ZUW!hc!ZUW UHh'bxUbW''5 b'cb']bY`UHh'bxUbW`cdh'cb'k]''VY</p>

Gi Va]gg]cb`cZ5ggYgga YbhiHUg_g

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

Ʒmci`YbWci bHYf`U`dfcV`Ya`k`Yb`UH`Ya`dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`h`fci`[`\`Hi`fb]h]b`z`d`Y`Ug`Y`
HY`Yd`cb`Y`9I`HY`fb`U`Gi`ddc`fh`cb`-`,`)`"``"``%`cf`Ya`Uj`h`Ya`cb`YI`HY`fb`U`HY`hgi`ddc`fh`4`i`bgk`"YXi`"Ui`"Gi`ddc`fh`
`l`ci`fg`Uf`Y`,`.\$`\$Ua`-`-%`\$.\$`\$da`cb`k`YY`_X`Umg`U`b`X`-`.\$`\$Ua`-`).`.\$`\$da`cb`k`YY`_Y`b`X`g`f`l`*)`X`Umg`U`m`Y`U`f`l`"Ʒmci`
Uf`Y`i`b`U`V`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`Xi`Y`hc`U`Z`Ji`h`k`]h`Hi`fb]h]b`mci`a`Um`U`dd`m`Z`c`f`U`b`YI`HY`bg]cb`z`Vi`hmc`i`
a`i`gh`f`Y`h]b`mci`f`h]W`Y`h`bi`a`V`Y`f`Z`ca`9I`HY`fb`U`Gi`ddc`fh`f`U`cb[`k`]h`U`b`m`c`h`Y`f`f`Y`Y`j`U`b`h`X`c`W`a`Y`b`h`g`L`hc`
]b`Wi`X`Y`U`g`Y`j`]X`Y`b`W`hc`gi`ddc`fh`mci`f`YI`HY`bg]cb`U`dd`]W`h]cb`"Ʒmci`Ya`Uj`9I`HY`fb`U`Gi`ddc`fh`mci`k`j`
Ui`hc`a`U`h]W`U`m`f`Y`W`]j`Y`U`h]W`Y`h`bi`a`V`Y`f`z`Vi`h]Z`mci`HY`Y`d`cb`Y`mci`k`j`b`Y`Y`X`hc`gd`Y`W`Z]W`U`m`U`g`_`Z`c`f`cb`Y`
Hi`fb]h]b`U`gc`d`fc`j`]X`Y`g`i`d`X`U`h`Y`g`cb`h`Y`]f`g`m`g`h`Ya`g`h`U`h`g`cb`H`k`]h`Y`f`"

;`Yb`Y`f`U`m`z`U`gg`Y`g`ga`Y`b`h`i`U`g`_`g`a`i`gh`V`Y`gi`Va`]h`Y`X`Y`Y`W`f`cb]W`U`m`j`]U`Y`]h`Y`f`Hi`fb]h]b`cf`U`A`cc`X`Y`
U`gg][`ba`Y`b`h`i`h`]b`g`h`U`b`W`g`k`Y`f`Y`h`g`]g`b`c`h`d`c`g`g]V`Y`z`]h`k`]`V`Y`g`h`U`h`X`cb`mci`f`W`ci`fg`Y`g`A`cc`X`Y`g`]h`k`]h`
U`h`Y`fb`U`h]`Y`gi`Va`]gg]cb`X`Y`h]g`"

:`cf`]b`Z`c`fa`U`h]cb`cb`l`ck`hc`gi`Va`]h`U`gg][`ba`Y`b`h`i`cb`]b`Y`j`]U`A`cc`X`Y`.\`h`d`g`#`gh`X`Y`b`h`i`bgk`"YXi`"Ui`#`ck`!
gi`Va`]h`U`gg][`ba`Y`b`h`i`a`cc`X`Y`"

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

D`U[]Uf]ga `]g`i g]b[`hY`k cfXg`cf`]XYUg`cZc`hYfg`UbX`dfYgYbh]b[`hYa `Ug`mci f`ck b" `#WUb`hU`Y`a Ubm
Zcfa gZ`Zca `XY`]VYfU`h`V`X`Y`U`h]b[`hc`U`W`Y`X`Y`b`U`m`i`W`c`d`m]b[`Zca `U`gci f`W`k]h`ci hU`W`b`ck `YX[Ya Yb`h`

I B G K `[fci dg`d`U[]Uf]ga `]b`hc`hY`Zc`ck]b[`W`h`Y[cf]Yg.

7 cdm]b[.`i`g]b[`hY`g`Ua Y`cf`j Yfmg]a]Uf`k cfXg`hc`hY`cf][]bU`hY`hcf`]X`Y`U`k]h`ci hU`W`b`ck `YX[]b[`hY`

- i bXYfghUbx'mci f'f][\hg'UbX'fYgdcbg]V]h]Yg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[]Uf]ga ž'Wcdmf][\hžI BGK 'Gh XYbh7cXY'cZ7cbXi W'Ubx'5Ww'dhUV'Y'I gY'cZ I BGK '⇒H'F Ygci fW'g'Dc`]Wm
- VY'Uk UfY'cZh'Y'ghUbxUfXg'cZVY\Uj]ci f'YI dYW'X'cZYj Yfmcby`]b'h'Y'I BGK 'Wca a i b]m
- `cWJh'gYfj]Wg'UbX']bZcfa Uhcb'UVci hl BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZh'YgY'UfYUg'k]`VY'ZJa]]Uf'hc'mci ž'ch'Yfg'k]`VY'byk "; U]b]b['U'gc`X'i bXYfghUbx]b['cZU`h'Y fY'UH'X'UgdYW'g'cZ9@G9'k]`Y'd'mci 'a U_Y'h'Y'a cghcZmci f'gh X]Yg'Uhl BGK ""

[\hd. #gj V'YWf i \]XYg" \]VfUfm'i bgk "YXi "Ui #` \]gY#JVci h' \]gY](#)

