

IEST7600

ϕX][Ybci g' bck `YX[Y`DUftbYfg\]dg`]b`7 cbgYfj Uh]cb`/
7 Uf]b[`Zcf`7 ci bfm

HYfa `Hk c` `##`&\$&%

GWXcc`cZ<i a Ub]hYg`UbX`@Ub[i U[Yg` `##` I BGK `5ftgž8 Yg][b / `5fWx]hYwH fy

7ci fgY'8YHJ]`g

7fYX]hDc]bqg '*`

Gi a a UfmicZ`hY'7ci fgY

⊕X][Ybci g`_bck`YX[Y`c`XYfg`UFY`k`cf_]b[`k`]h`ck`hc`Ufh]W`UH`hY]f`_bck`YX[Y`dfUW]W]g`UbX`VY`]Yz`hc`
bcb!⊕X][Ybci g`UbX`bcb!`cWU`Ui`X]YbW]g"⊕`h`]g`Vci`fgYz`mci`k`]`Z`W`g`cb`Yh`]WU`UbX`Yei`]hUV`Y`k`Umg`cZ`
]bhY[fU]b[`⊕X][Ybci g`UbX`cWU`_bck`YX[Y`gmghYa`g`k`]h`K`YghYfb`gW]Ybh]Z]W`_bck`YX[Y`gmghYa`g`hc`
]bZ`fa`gi`ghU]bUV`]hmiUbX`VcbgYfj`U]cb`dc`]WmiUbX`dfUW]W]"Mci`k`]`YUfb`UVci`hUddfcdf]UH`UbX`YZZYW]j`Y`
k`Umg`hc`g`UFY`UbX`Vca`V]bY`h`YgY`_bck`YX[Y`gmghYa`g`Z`f`Vc`UVcfU]h]Y`Ybj`]fcb`a`YbHU`YUXYfg`d"⊕`h`Y`
a`]XghcZ[`cVU`W]gYgž]bWi`X]b[`W]a`UH`X]gfi`dh]cbž`Uf[Y`gWU`Y`Yi`h]bW]cbgž`UbX`Yi`UW]fVUH`X`Vi`g`Z]fYgž`
mci`k`]`fYh]b`_k`Umg`gcW]YhmiW]b`VcbW]dh`U`]gY`Ybj`]fcb`a`YbHU`dfcV`Ya`g`UbX`VcbgYfj`U]cb`dfUW]W]g"⊕`
UXX]h]cbž`mci`k`]`]bj`Ygh[UH`ck`hc`Vi`]X`fY[]cbUž`bU]cbUž`UbX[`cVU`gW]YbW]dc`]Wmi`h`Uh]g]bWi`g]j`Y`cZ`
g]h`UH`X`⊕X][Ybci g`UbX`cWU`_bck`YX[Y`gmghYa`g`k`]h`ci`h`Vca`dfca`]g]b[`h`Y`]bhY[f]hmicf`Y[]h]a`UWmicZ`
gW]Ybh]Z]W`⊕X][Ybci gž`cf`cWU`_bck`YX[Y`gmghYa`g`

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

%`8YgW]VY`h`Y`]bhY`fVcb`bbYW]XbYgg`cZ`W`h`fY`UbX`YVc`c[m]b`⊕X][Ybci g`UbX`cWU`_bck`YX[Y`
gmghYa`g`UbX`h`Y`dcgg]V`]h]Yg`Z`f`Yh`]WU`]bhY[fU]cb`k`]h`K`YghYfb`gW]Ybh]Z]W`_bck`YX[Y`
&"5dd`mia`i`h]d`Y`Yj`]XYbW]VUgYg`hc`h`Y`h`Y`c`fm`UbX`dfUW]W]cZ`UbX`fYg`hc`fU]cb`UbX`W]fY`

5ggYgga Ybh

<Ufj UfX'fYZYfYbW]b['gmgHYa 'g\ci 'X'VY'i gYX'Zc'f'YggUmiUbX'Z]bU'fYZYW]cb"

5`UggYgga Ybhg'k]`VY'ci h]bYX']b'WUgg']b'k YY_`%"

5ggYgga YbhHUg_g

5ggYgga YbhHUg_	K Y][\h	8i Y'8UH	Gh XYbh@YUfb]b[Ci hWca Yg'5ggYggYX
DYfgcbU'@YUfb]b['>ci fbU'	&\$i	Z]fgh'ci fbU'Xi Y'k YY_`% \$(#*\$ #&\$&%&da 'hYb k YY_mžk]h 'hY'Z]bU'`ci fbU' Xi Y'k YY_`* \$- #+\$&\$&%&da	%ž' ž(
9ggUmi	' \$i	% #+\$&\$&%%%\$ \$DA	%ž'
F YZYW]cb') \$i	:]bU'k f]hYb'fYZYW]cb'Xi Y : f]XUmcZk YY_`%\$ fBi [i gh *Ł	%ž'&ž' ž(

5ggYgga Ybh8YHJ]g

5ggYgga Ybh% 'DYfgcbU'@YUfb]b['>ci fbU'

GhUfhXUH. 'Bch5dd]WVY

@Yb[h. 'a]b]a i a '&\$ \$'k cfXg'UbX'a Ul]a i a ') \$ \$'k cfXg'Zc'f'YUW'cZk YY_g`%ž*"

8YHJ]g.

H\Y'ci fbU'k]`VY'Ydhihfc [\ci hihY'hYfa žk]h'k YY_mYbhf]Yg fgi Va]hYX'k YY_m'—ZYXVUW_j]U'j YfVU'
cf'k f]hYb'Wca a Ybhg'F Yei]fYg'W]hW'UbX'dYfgcbU'Yb[U[Ya Ybhk]h 'Wci fgY 'WcbhYbhUbX'Yi dYf]Ybh]U'
'YUfb]b[ž'UbX'a Um]bWi XY'g\cfhfYZYW]cbg'cb'U'bi a VY'cZdfY!gYhei Ygh]cbg"@Yb[h. '&\$ \$'k cfXg'dYf'
k YY_`Zc'f'k YY_g`%ž*"

: YXVUW_j]U'U'fi Vf]Wžbi a Yf]W'a Uf_ž'UbX'Wca a Ybhg"

5XX]h]cbU'XYHJ]g.

H\Y'ci fbU'hUg_`Zc'f'k YY_`%k]`VY'dcghYX'cb'a ccX'Y'VYZc'f'Y'hYfa 'ghUfhg'UbX']g'hc'VY'Wca d'YhYX'Zc'f'
X]gW'gg]cb']b'WUgg'cb': f]XUmcZk YY_`%"

>ci fbU'g'Zc'f'gi VgYei Ybhk YY_g'k]`VY'VUgYX'cb'mci f'ck b'YUfb]b['fYZYW]cbg'fW]hYf]U'UbX'[i]XUbW'
dfcj]XYX']b'WUgg'k YY_`%ži b'Ygg'chYf'gdYW]Z]W]hUg_g'UFY'gYH'

Gi Va]gg]cb' bchYg. 'Gi Va]h'fc [\a ccX'Y']b'_cb': f]XUmZc'f'YUW'cZk YY_g`%ž*"

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

5ggYgga Ybh&. '9ggUm

@Yb[h. '%&\$!%(\$ \$'k cfXg'fbch]bWl X]b['fYZfYbW'']gH

8YHJ]g.

H\Y'YggUmfUVci h%&\$ \$'k cfXg'k]''ci h]bY'Yh]Wl''UbX'Yei]hUV'Y'k Umg'cZ]bH[fUH]b['fX][Ybci g'UbX''cWl
_bck 'YX[Y'gmgh'a g'k]h'K Ygh'fb'gVYbH]ZW_bck 'YX[Y'hc']bZcfa 'gi ghU]bUV]]miUbX'Vc'bgYfj Uhc'b'dc']Wn
UbX'dfUW]W''@YUfb]b['k]''VY'VUgYX'cb'gYa]bUfg'UbX'dfYgYbH]cbgž'fYUX]b[gž'UbX'Vc'bj YfgUhc]bg''Gca Y
'\i fX'Y'Ugg][ba Ybht'gi W'Ug'cb']bY'ei]nnYgžk]''VY']bWl XYX''

: YYXVUW_ k]''VY' [] Yb']b'h'Y'Zcfa 'cZU'fi Vf]Wf]bWl X]b['h'Y'\i fX'Y'hUg_gž'bi a Yf]Wl'a Uf_ž'UbX
Vc'a a Ybht''

5XX]h]cbU'XYHJ]g.

<i fX'Y'Ugg][ba Ybht'k]''VY'gYhZcf'k YY_g'&! ('UbX'dfcj]XYX'cb'a ccX'Y''

9ggUmW]h'f]U'UbX' [i]XUbW'k]''VY'dfcj]XYX']b'WUgg']b'k YY_'%f'gi Va]gg]cb'XUH'Zcf'YggUm]g'>i 'm% 'L''

Gi Va]gg]cb'bch'g. 'Gi Va]h'h'fci ['\ 'a ccX'Y'']b_

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

5ggYgga Ybh' . 'F YZYW]cb

GHUfhXUH. 'Bch5dd']WUV'Y

@Yb[h. '&\$ \$\$'k cfXg'fbch]bWl X]b['fYZfYbW'']gH

8YHJ]g.

H\Y'Z]bU'UggYgga Ybh'fUVci h&\$ \$\$'k cfXg'k]''VY'U'fYZYW]cb'cb'k \Uh\Ug'VYYb''YUfbh'fYfUa YX'UbX
i bXYfg'ccX'Xi f]b['h'Y'Vc'i fgY''H\Y'UggYgga Ybhk]'']bWl XY'U'k f]h'Yb'hUg_'fUggYggYX'Vmi b]j Yfg]m
UW]XYa]Ug'UbX'h'Y'ch'Yf'Vc'a dcbYbht'cZ'h'Y'UggYgga Ybhk]''VY'VUgYX'cb'XYa cbgh'Uhc'b'cZ
i bXYfg'UbX]b[']b'h'Y'Z]Y'X''H\Y''cWl''_bck 'YX[Y'Ui h'cf]h]Yg'k \c'\cgh'h'Y'Z]Y'X'f]d'k]''Vc'!XYg][b'h'g
UgdYW'h'cZ'h'Y''YUfb]b['hUg_'UbX'VY'Vc'!UggYggc'fg'cZ'Vc'a dY'h'bW'#YUfb]b['ci h'Vc'a Yg''

: YYXVUW_ j]U'U'fi Vf]Wž'bi a Yf]Wl'a Uf_ž'UbX'Vc'a a Ybht''

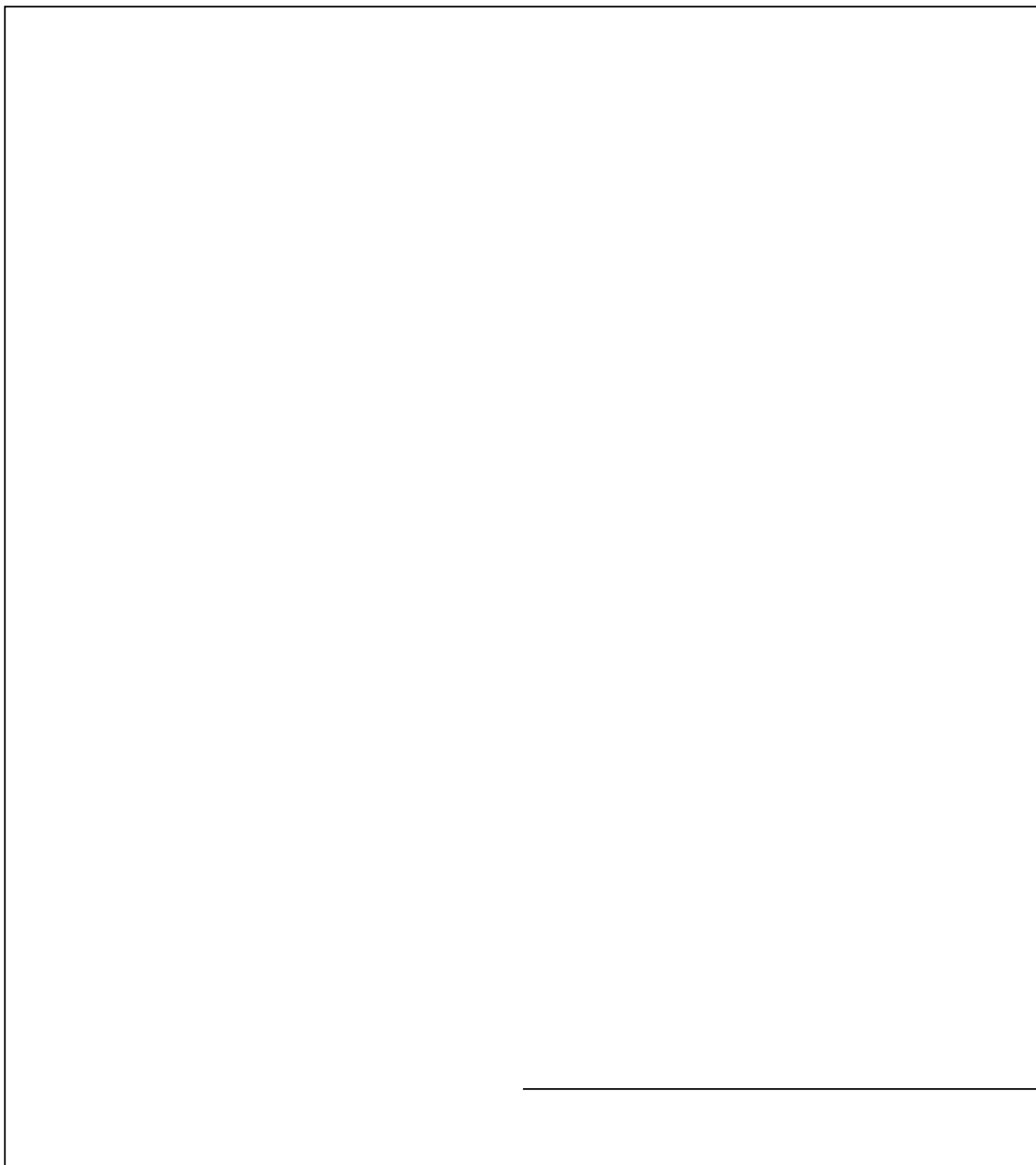
5XX]h]cbU'XYHJ]g.

H\Y'hUg_'XYg][bYX'UbX'UggYggYX'VmHfUX]h]cbU''7i gh'cX]Ubg'k]''VY'i bXYfU_Yb'Xi f]b['h'Y'a i 'h'!XUmZ]Y'X
h]d'UbX'k]''VY'k cf'h'&) i 'f'U'ZcZ'h'Y') \$i 'L''

H\Y'Z]bU'k f]h'Yb'fYZYW]cb'fa Uf_YX'VmiVc'i fgY'Vc'bj Ybcfg'k]''VY'ci h]bYX'Xi f]b['WUgg']b'k YY_'%UbX']g
Xi Y'YbX'cZ'h'fa 'f] f]XUm5i [i gh'*h'žk YY_'%&'L''

Gi Va]gg]cb'bch'g. 'Gi Va]h]Z]bU'k f]h'Yb'fYZYW]cb'h'fci ['\ '']b_'cb'a ccX'Y''

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`W fUHfX`gYhcZa UbXUhcfmfYgci fWg`k]`VY`Uj U]UV`Y`h`fci [\`@Y[Ubhc`UbX`cb`h`Y`Wci fgY`a ccX`Y`g]h`Zcf`h`Y`ghUfhcZ`h`fa "

H\YfY`]g`U`j UghUffUmcZ`]h`fUhi`fY`UbX`k`YV]bUfgz`dcXWUghg`YhW`h`Uhi]bZ`fa`h`]g`Wci`fgY`" `#i]g`ghfcb[`m`fYWca`a`YbXYX`h`Uhmci`ghUfh`cc_]b[`UhfY`Yj`UbhfYgci`fWg`VY`ZcfY`h`Y`Wci`fgY`ghUfhg`"Gca`Y`fYgci`fWg`fUj`U]UV`Y`h`fci [\`@Y[Ubhc`UbX`Ug`YVcc`g`]b`I`BGK`"]VfUfm`h`c`ghUfhk`]h`]bWi`XY.

"8Uf`_`9a`i`"Vm6fi`W`DUgWcY`

"@cj]b[`7ci`blfm`"7`UdhYf`%fdd`%d`%`cb`;`i`U[`U/`'6]Ua`Ub[`U`fdYdUfUhc]b`Zcf`ZY`X`hf]d`&`\$`\$`

"Gcb[`]bYg`!`H\Y`Dck`Yf`UbX`h`Y`Dfca`]gY`"VmA`Uf[`c`BYU`UbX`@mbbY`?`Y`m`&`\$`\$`

"GUWYX`9Wc`c[`m`Vm: `]f`Yh6Yf`_Yg`&`\$`&`

F YWca a YbXYX`F Ygci fWg

5`"]ghcZk`]XYf`fYWca`a`YbXYX`fYgci`fWg`fYVcc`g`]b`I`BGK`"]VfUfmUbX`"]b`_YX`h`c`@Y[`Ubhc`h`]bWi`XYg.

"Gcb[`gd]fU`g`!`g\Uf]b[`k`ca`Yb]k`]gXca`c`Z7ci`blfm`h`fci [\`gcb[`]bYg`"Vm`h`Y`;`Umfk`i`];`fci`d`c`ZK`ca`Ybž`&`\$`%`ž`5`Yb`/`I`bk`]b`

"H\Y`8`fYUa`]b[`UbX`c`h`Yf`YggUmg`"VmK`"9`<`" `GhUbbYf`

"6fU]X]b[`Gk`YYh`fUgg`!`#X][`Ybci`g`K`]gXca`ž`GWYbh]Z]W?`bck`YX[`Y`UbX`h`Y`HYUW]b[`g`c`ZD`Ubhg`"VmF`cV]b`K`U`"?`]a`a`YfYf`&`\$`%`!`fYUX`d`&`(%`&)`'`"

Hk`c`df]bhVcc`g`Uj`U]UV`Y`]b`I`BGK`"]VfUfm`"GUbX`HU`_"VmHmgcb`M`b`UdcftU`

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

H\]g`]g`h`Y`]bUi`[`i`fU`m`Y`Uf`Zcf`h`]g`Wci`fgY`"5g`k`Y`"Ug`h`Y`a`n9I`dYf]YbW`ZYXVUW`ž`U`gi`fj`Ymk`]`VY`dfcj`]XYX`h`c`gh`XYbh]c`h`Wca`d`Yh`Zcf`ZYXVUW`cb`h`Y`ZY`X`hf]dg"

Gi Va]gg]cb 'cZ5ggYgga YbhiHUg_g

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

Ẓmci 'YbWci bHYf'U'dfcV'Ya 'k \Yb'UHYa dh]b['hc'gi Va]hmc i f'Ugg][ba YbhiH'fci [\ 'Hi fb]h]bž'd'YUgY
HY'Yd\cbY'9I HYfbU'Gi ddcfhcb'- ' ,) " ' ' %cf'Ya U] 'H'Ya 'cb'YI HYfbU'HY'gji 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'mYUfI" Ẓmci
UfY'i bUV'Y'hc'gi Va]hmc i f'Ugg][ba YbhiXi Y'hc'U'Zji 'hk]H'Hi fb]h]b'mci 'a UmiUdd'm'Zc'f'Ub'YI HYbg]cbž'Vi hmc i
a i ghfYH]b'mci f'h]W'Yhbi a VYf'Z'ca '9I HYfbU'Gi ddcfhfU'cb['k]H'Ubmich'Yf'fY'Yj UbhXcW a Yb'gk'hc
]bWi XY'Ug'Yj]XYbW'hc'gi ddcfhmc i f'YI HYbg]cb'Udd'j]W]h]cb" Ẓmci 'Ya U] '9I HYfbU'Gi ddcfhmc i 'k]`

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

D`U[]Uf]ga `]g`i`g]b[`h`Y`k`c`f`X`g`c`f`]X`Y`U`g`c`Z`c`h`Y`f`g`i`U`b`X`d`f`Y`g`Y`b`h]b[`h`Y`a` `U`g`m`c`i`f`c`k`b`" `#`W`U`b`h`U`_`Y`a` `U`b`m`
Z`c`f`a`g`Z`Z`c`a` `X`Y`]V`Y`f`U`H`Y` `W`X`Y`U`H]b[`h`c`U`W`W`Y`X`Y`b`h`U`m`i`W`c`d`m]b[`Z`c`a` `U`g`c`i`f`W`k`]h`c`i`h`U`W`b`c`k` `Y`X[`Y`a` `Y`b`h`

- 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'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 'Wc a i b]m
- `cWJh'gYfj]W'g'UbX']bZcfa Uh'cb'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'YW'f i \]XYg" \]VfUfm'i bgk "YXi "Ui #' \]gY#JVci h' \]gY](#)

