

EDST5114

Ⓜj Ygh[Uh]b['Ⓜgi Yg']b'7 i ff]W`i a `UbX'5ggYgga Ybh

GYa YghYf'C.bY`##`&\$%

7 ci fgY`Cj Yfj JYk

'GHUZZ'7 cbhUW'8YHU]`g`

'7 cbj Ybcfg`

B Ua Y	9a Uj`	5j Uj`UV]`]m	@cWUhc b	D\cbY
7 Ufc`HUmcf	YXi WUhc b4 i bgk "YXi "Ui	H67	GYgg]cbU`	D`YUgY`i gY Ya Uj`Ug UVcj Y

GWXcc`7 cbhUW'`bZcfa Uh]cb

GWXcc`cZ9Xi WUhc b

5 fng`UbX`GcWU`GWYbWg

@Yj Y`%ž>c\`b` ; ccXgY`oi]X]b[`fi &\$Ł

H. Ž`*%f&Ł`-` ,)` %` ++

9. YXi WUhc b4 i bgk "YXi "Ui

K . YXi WUhc b"Ufngi bgk "YXi "Ui

5 hYbXUbW`F Yei]fYa Ybhg

5XX]hc bU`GWXcc`cZ9Xi WUhc b`UhYbXUbW`fYei]fYa Ybhg

h]g`YI dYWYX`hUhUbmghi XYbhYbfc`YX`]b`Ub`98GH`Vci fgY`k]h`hY`GWXcc`cZ9Xi WUhc b`k]`a`U_Y`U
Vci a]ha`Ybhic`hY]f`YUfb]b[`UbX`UhYbX`U`WUggYg`]b`Z`k`YfY`Vci bH`bh]g`XY`]j`YfYX`]b`U`ZUW`!h`!ZUW
a`cXY`YI`Wdh]b`Wfhu]b`WfW`a`ghUbW`g`k`YfY`UVgYbW`]g`Xi`Y`h`c`]`bYgg`a`]gUXj`Ybh`fY`cf`i`bZcfYgYYb
WfW`a`ghUbW`g`VYncbX`hY`gh`XYbhg`Vci bfc`"5`a`]b]a`i`a`UhYbXUbW`fYei]fYa YbhicZ, \$i`]g`fYei]fYX`Zcf
YUW`Vci fgY`"b`Wfhu]b`WfW`a`ghUbW`g`Z`U`gh`XYbhia`Uma`]gg`i`d`h`&\$i`cZU`Vci fgY`k]h`ci`hZcfa`U`
Udd`]WUhc b`UbX`i`d`h`"i`cZU`Vci fgY`k]h`Zcfa`U`XcW`a`YbH]cb`fYbhj`]U`Ya`Uj`h`c`Vci fgY`Vci b] YbcfŁ
dfcj]X]b[`U`hY`fYei]fYa Ybhg`XYHU]YX`VY`ck`UfY`a`Yh`Gh`XYbhg`bcha`YYh]b[`hY`UhYbXUbW`
fYei]fYa Ybhg`ci`h]bYX`UVcj`Y`k`]`VY`Uk`UfYX`Ub`i`bgU]gZUW`c`fm: Uj`fi`: Ł`Zcf`hUhVci fgY`fY[UfX`Ygg`cZ
hY]f`dYfZcfa`UbW`]b`hY`UggYgga`YbhUg`g`cf`chYf`fYei]fYa Ybhg`Zcf`hY`Vci fgY"

: cfZ`fH`Yf`]bZcfa`Uh]cb`cb`9Xi`WUhc b`Vci`fgY`UhYbXUbW`fYei]fYa Ybhg`ž`d`YUgY`fYZf`h`hY`fYgdYW]j`Y`98GH`A`ccX`Y`a`cXi`YfgŁ`

5 WUXYa]W`bZcfa Uh]cb`

5`gh`XYbhg`a`i`gha`U_Y`Uj`U]X`UhY`a`dhUhU`UggYgga`Ybhg`]b`cfXYf`h`dUgg`hY`Vci`fgY"

: cfYggYbh]U`gh`XYbh]bZcfa`Uh]cb`fY`Uh]b[`h`c`fYei`Yghg`Zcf`YI`hYbg]cb/fYj`JYk`cZa`Uf_g/cWW`dUh]cbU`YU`h`
UbX`gUZf`m`YI`Ua`]bUh]cb`dfcW`Xi`fYg/gdYWU`Vci bg]XYfUh]cb`]b`hY`Yj`YbhicZ`]bYgg`cf`a`]gUXj`Ybh`fY/
gh`XYbhYei]hmUbX`X]gUV]`]m`UbX`chYf`YggYbh]U`UWUXYa`]W]bZcfa`Uh]cbž
gYY`[\fhdg.#k.k"Ufng"i`bgk`"YXi`"Ui`#W`ffYbhghi`XYbhg`#UWUXYa`\]W\]bZcfa`Uh\]cb`#dfc`h`Vci`g!`\[i`\]XY`\]bYg#](#)

7 ci fgY'8YHJ]`g

7 fYX]h'Dc]bhg '*`

Gi a a UfmcZ'h\Y'7 ci fgY

h'h]g`Vci fgYžm

5i ghfU`]Ub`DfcZYgg]cbU` ; fUXi UhY`HYUW]b[`GHUbXUfXg

GHUbXUfX	8YgW]dhcb
%"&"(@YUX`dfcW]ggYg`hc`Yj`U`i`UhY`h`Y`Y`ZYW]j`YbYgg`c`Z`h`U`W`]b[`dfc[fUa`g`i`g]b[`fYgYUfW`UbX`k`cf`d`U`W`]_bck`YX[Y`UVci`h`ck`gh`XYbhg`YUfb
%) ""	9j`U`i`UhY`Y`U`fb]b[`UbX`h`Y`U`W`]b[`dfc[fUa`g`z`i`g]b[`gh`XYbhUggYgga`YbhXUfUz`h`UhUfY`X]ZYfYbh]UhY`X`Z`c`f`h`Y`g`d`Y`W]Z`W`Y`U`fb]b[`b`Y`Y`X`g`c`Z`gh`XYbhg`U`W`c`g`g`h`Y`Z` ""fUb[Y`c`Z`UV]]hYg"
*"&"&	DUfh]W]dUhY`]b`Y`U`fb]b[`hc`i`dXUhY`_bck`YX[Y`UbX`d`f`U`W]W`z`h`U`f[Y`h`X`hc`dfcZYgg]cbU`b`Y`Y`X`g`UbX`g`W`cc`UbX`#`c`f`g`m`g`h`a`d`f`c`f`h`Y`g"
*"" ""	h]h]UhY`UbX`Yb[U[Y`]b`dfcZYgg]cbU`X]gW`gg]cbg`k`]h`W`c`Y`U[i`Y`g]b`U`f`U`b[Y`c`Z`Z`c`f`i`a`g`hc`Y`j`U`i`UhY`d`f`U`W]W`X]f`Y`W`Y`X`U`h]a`d`f`c`j`]b[`dfcZYgg]cbU`_bck`YX[Y`UbX`d`f`U`W]W`z`UbX`h`Y`Y`X`i`W`h`c`b`U`c`i`h`W`c`a`Y`g`c`Z`gh`XYbhg"

5ggYgga Ybh

5ggYgga YbhHUg_g

5ggYgga YbhHUg_g	K Y][\h	Gh XYbh@YUfb]b[Ci hWca Yg 5ggYggYX	5 #HG@DfcZYgg]cbU"; fUXi UHY HYUW]b['GHUbXUfXg'5ggYggYX	8i Y 8UHY
F YZYW]cb'dUdYf'	(\$i	%Z	%&"(Z%) "" Z*"&"&Z"" ""	&' # \$' #& \$% \$) . \$\$ DA
5bU`m]W]dUdYf UbX'dfYgYbhU]cb'	* \$i	%Z&Z	%&"(Z%) "" Z*"&"&Z"" ""	\$+ # \$ & # & \$% \$) . \$\$ DA

D`YUgY`fYZf`h`c`3gef`S`[S` B`d`X`W`e`[a` S`^`E`f`S` V`S`d`V`e` X`d`F`W`S`U`Z`W`e`c`b`h`Y`d`f`Y`j`]`c`i`g`d`U`[`Y`

5ggYgga Ybh8YHU]`g

5ggYgga Ybh% F YZYW]cb'dUdYf

GHUfhXUHY. Bch5dd`]WV`Y

8YHU]`g. 'HUg_`%`!`K` f]hYb`fYZYW]cb`cb`hYUW]b[`Yi`dYf]YbW`]b`W`c`b`h`Y`a`d`c`f`U`f`m`Y`X`i`W`U]cb`W`c`b`h`Y`l`h`g`" `@Yb[`h`.
&\$\$ \$`k`c`f`X`g`E`i`U`]h]h]`Y`UbX`ei`Ubh]h]h]`Y`ZYXVUW`_`k`]h]b`%\$`X`U`m`g`c`Z`g`i`V`a`]gg]cb"

Hi`fb]h]b`g`Y`h]b[. `H\]g`Ugg][`ba`Ybh]g`g`i`Va`]hY`X`h`f`c`i`[`\`Hi`fb]h]b`UbX`g`h`X`Y`b`g`X`c`b`c`h`g`Y`Y`Hi`fb]h]b`
g]a`]Uf]m`f`Y`d`c`f`g`"

5ggYgga Ybh&. 5bU`m]W]dUdYf`UbX`dfYgYbhU]cb

GHUfhXUHY. Bch5dd`]WV`Y

8YHU]`g. 'HUg_`&`!`K` f]hYb`UbU`mg]g`UbX`dfYgYbhU]cb`c`Z`U`g][`b]Z]W]b]h]g]g]i`Y`f`Y`U`H`X`h`c`W`f`f]W`i`a`Z`UbX`#`f`
UggYgga`Ybh`UbX`#`f`f`Y`d`c`f`h]b[`h`U`h]g`c`Z]b`h`f`Y`g`h`c`m`c`i`@Yb[`h`.(`\$\$`\$`k`c`f`X`g`f`k`f]hYb`d`U`d`Y`f`h]a`Y`.)`a`]b`i`h`Y`g`
f`d`f`Y`g`Y`b`h]c`b`E`i`U`]h]h]`Y`UbX`ei`Ubh]h]h]`Y`ZYXVUW`_`k`]h]b`%\$`X`U`m`g`c`Z`g`i`V`a`]gg]cb"

Hi`fb]h]b`g`Y`h]b[. `H\]g`Ugg][`ba`Ybh]g`g`i`Va`]hY`X`h`f`c`i`[`\`Hi`fb]h]b`UbX`g`h`X`Y`b`g`X`c`b`c`h`g`Y`Y`Hi`fb]h]b`
g]a`]Uf]m`f`Y`d`c`f`g`"

Gi Va]gg]cb`cZ5ggYgga YbhHUg_g

Gh XYbng`UfY`YI dYW`X`hc`di h`h`Y]f`bUa Yg`UbX`gh XYbhbi a VYfg`cb`Yj YfmdU[Y`cZ`h`Y]f`Ugg][ba Ybhg"

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

≠mci`YbWci bhYf`U`dfcV`Ya`k`Yb`U`h`Ya`dh]b[`hc`gi Va]hmcif`Ugg][ba Ybh`h`fci [\`Hi`fb]h]b`z`d`YUgY
h`Y`d`cb`Y`9I`h`fb`U`Gi`ddcfh`cb`-`'`,`)`''`'`%cf`Ya`U]`h`Ya`cb`[YI`h`fb`U`h`h`gi`ddcfh`i`bgk`"YXi`"Ui`"Gi`ddcfh](#)

f`G][b]Z]W]b]h]m]U]Z]Y]W]h]m]i] f]d]Y]f]Z]c]f]a] U]b]W]W]]b]U]g]g]Y]g]g]U]V]`Y]`k] c]f]_]Z]V]Y]`]h]U]`Z]c]f]a] U]`Y]b]X]!]c]Z]g]Y]a] Y]g]h]Y]f]`Y]I] U]a]]b]U]h]c]b]Z]U] W]U]g]g]`h]Y]g]h]Z]U]`U]V]c]f]U]h]c]f]m]h]Y]g]h]Z]U]`g]Y]a]]b]U]f]d]f]Y]g]Y]b]h]U]h]c]b]`c]f]U]b]m]c]h]Y]f]Z]c]f]a] `c]Z]U]g]g]Y]g]g]a] Y]b]h]

: c]f]Z] f]h]Y]f]X]Y]h]U]`g]`]b]`f]Y]`U]h]c]b]`h]c]`G]d]Y]W]U]`7]c]b]g]X]Y]f]U]h]c]b]`]b]W]i] X]b] [`]K] \]Y]b]`h]c]`5]d]d]`m]Z]`<]c]k] `h]c]`5]d]d]`m]`U]b]X] `]G]i] d]d]c]f]h]b] [`]8]c]W] a] Y]b]h]U]h]c]b]`d]`Y]U]g]Y]`f]Y]Z]f]`h]c]`h]Y]`G]d]Y]W]U]`7]c]b]g]X]Y]f]U]h]c]b]`k] Y]V]g]h]Y]`.

[\\]h\]c\]g.\]#\]g\]h\] X\]Y\]b\]h\]i\] b\]g\]k\] "Y\]X\]i\] "U\]i\] #\]g\]d\]Y\]W\]U\]`!\]W\]c\]b\]g\]X\]Y\]f\]U\]h\]c\]b\]](#)

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" #WUb'hU_Y'a Ubm Zcfa gž Zca 'XY]VYfUHy'WXYU]b['hc'UWV]XYbU`mWčdm]b[Zca 'U'gci fW'k]h'ci hUW_bck 'YX[Ya Ybh'

I BGK '[fci dg'd`U[]Uf]ga]bhc'hY'Z`ck]b['WUHy[cf]Yg.

7cdm]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'ja U[YgžUfhUbX'XYg][b'dfc'YWgžUg'k Y`'Ug dfYgYbhU]cbg'k \YfY'gca YcbY'dfYgYbhg'Ubc'hYf'g:]XYUg'cf'k cfXg'k]h'ci hWYX]h'

#Uddfcdf]UHy'dUfUd\Ug]b[.W\Ub[]b['U'Z'k'k cfXg'UbX'd\UgYg'k \]Y'a cghmfYU]b]b['hY'cf][]bU'gf'i W\ fY'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\UgYg'Ubc'hYf'g:]XYUg'cf'k cfXg'k]h'ci hWYX]h' #U'gc'Udd']Yg'hc'd]YW]b['hc[YhYf'ei chYg'UbX'dUfUd\UgYg']bhc'U'bYk'k \c'Yžk]h'ci hfYZfYbW]b['UbX'U'ghi XYbh'g'ck b'UbU'mg]g'hc'Vf]b['hY'a UHyf]U'hc[YhYf"

7c`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_"7c`i g]cb'U'gc]bWi XYg'dfcj]X]b['mci f'k cf_'hc'Ubc'hYf'ghi XYbhVYZc'fY'hY'Xi Y'XUHyžcf'Zcf'hY'di fdcgY'cZ'hYa d`U[]Uf]g]b['UhUbmi]ja Yž'dUm]b['Ubc'hYf'dYfgcb'hc'dYfZcfa 'Ub'UWXYa]WUg_žghU']b['cf'UWči]f]b[Ubc'hYf'dYfgcb'g'UWXYa]Wk cf_'UbX'Wčdm]b[]ž'cZYf]b['hc'Wč'a d'YHy'Ubc'hYf'dYfgcb'g'k cf_'cf'gYY_]b[dUma YbhZc'f'Wč'a d'Y]b['UWXYa]Wk cf_"

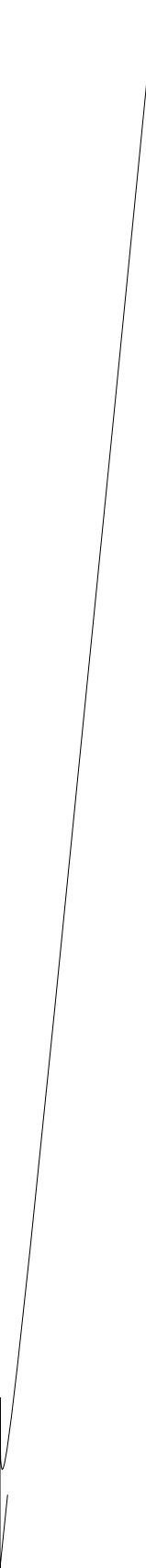
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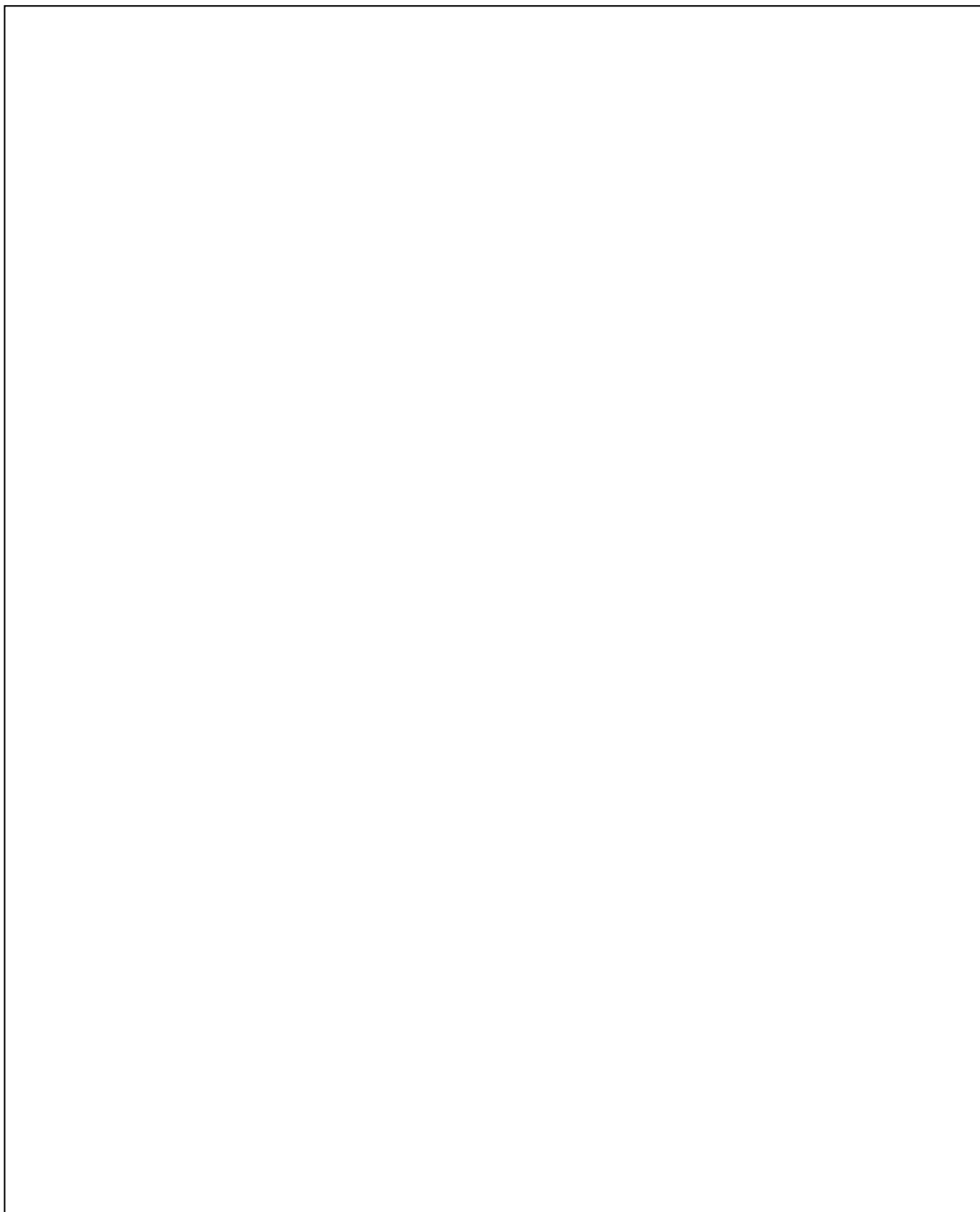
8i d`]WU]cb'ffgY'Zd`U[]Uf]ga "E'gi Va]h]b['mci f'ck b'k cf_ž]b'k \c'Y'cf']b'dUfž'k \YfY']h\Ug'dfYj]ci g'm VYYb'dfYdUfYX'cf'gi Va]hYX'Zc'f'Ubc'hYf'UggYgga Ybhcf'Wč'i fgY'Uhi BGK 'cf'Ubc'hYf'i b]j Yfg]m'

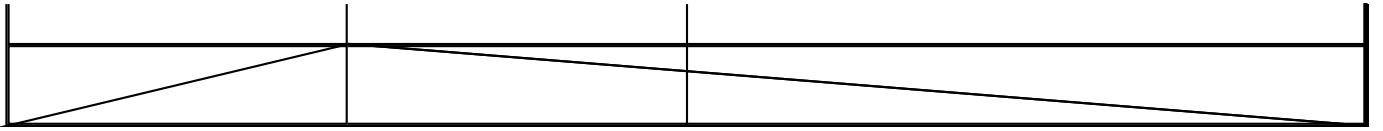
7cffYW'fYZYfYbW]b['dfUW]W'g.

- DUfUd\Ug]b[žgi a a Uf]g]b[žYggUmk f]h]b['UbX'h]a Y'a UbU[Ya Ybh
-

- VYhYf'a UbU[Y'mci f'hja Y
- i bXYfgHUbX'mci f'f][\hg'UbX'fYgdcbg]V]hYg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[]Uf]ga ž'Wcdf][\hž' BGK 'Gh XYbh7cXY'cZ7cbXi WñUbX'5WwdfUV'Y'l gY'cZ
I BGK '⇒H'F Ygci fW'g'Dc`]Wñ







F Ygci fWg

DfYgW]VYX`F Ygci fWg`

D`YUgY`gYY`A ccX`Y

F YWca a YbXYX`F Ygci fWg

D`YUgY`gYY`A ccX`Y

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