

ARTS2813

fbUhc bU`GYW f]m fbUhc bU`GYW f]m

GWcc`cZGcWU`GWYbWg`#`1 BGK `5ftg`UbX`GcWU`GWYbWg

7ci fgY`Cj Yfj]Yk

`GHUZZ`7cbhUWh`8YHU]`g`

`7cbj Ybcfg`

B Ua Y	9a U]`	5j U]`UV]`]m	@cWWhcb	D\cbY
A cb]_U`6Ufhk U! 8UHU	a "VUfhk U!XUHU4 i bgk "YXi "Ui	H\i f`%%5A !%&DA	F a `%(- ž A cfj Yb`6fck b 6i]X]b[- ' ,) \$)) +

`Hi hcfg`

B Ua Y	9a U]`	5j U]`UV]`]m	@cWWhcb	D\cbY
5b[Y`U`Ga]h	GC GG4 i bgk "YXi "Ui	H67	H67	H67

GWcc`7cbhUWh`bZcfa Uh]cb

GWcc`cZGcWU`GWYbWg

Fcca `%) -

A cfj Yb`6fck b`7 &\$

Ya U]`.gcgg4 i bgk "YXi "Ui

d\cbY. `\$&-' ,) `%) \$+

7ci fgY'8YHJ]`g

7fYX]hDc]bng`*`

Gi a a UfmicZ`h`Y'7ci fgY

Gi V`Y`W`i`5`f`Y`U` .`Ba`f`[`Ue`S`V` ;` f`W`d` S`f`[a` S`^`D`W`S`f`[a` e`

⊕`h`j`g`V`c`i` fgY`z`m`c`i` `k`]`Y`i` Ua`]bY`h`Y`_`Y`m`]b`h`f`b`U`h`c`b`U``g`Y`W` f`]m`]g`g`i` Y`g`g`]b`W` `h`Y` `Y`b`X` `c`Z`h`Y` `7`c`X` `K` U`f` `H` `Y`
Y`b`X` `c`Z`h`Y` `7`c`X` `K` U`f` `U`b`X` `f` `c`V`U` `]g`U`h`c`b` ` `U`j` Y` `W`c`]b`W` `X`Y`X` `k`]h` `h`Y` `Y`a` Y`f` [`Y`b`W` `c`Z`U` ` `c`g`h`c`Z` ` `b`Y`k` ` ` `g`Y`W` f`]m`
W`X`U` `Y`b` [`Y`g` `h`c` `h`Y` `g`h`U`h` ` `H` `Y`g`Y`]b`W`i` X`Y` `h`Y` `d`f`c`]Z`Y`f`U`h`c`b` `c`Z`W`c`b`j` Y`b`h`c`b`U` `k` Y`U`d`c`b`g` `U`b`X` `c`Z`k` Y`U`d`c`b`g` `c`Z`a` U`g`g`
X`Y`g`h`f`i` W`h`c`b`z`]b`h`f`b`U`h`c`b`U` `W`]a` Y`z`]b`h`f`b`U`h`c`b`U` `h`Y`f`f`c`f`]g`a` ž`Y`b`j`]f`c`b`a` Y`b`h`U` `X`Y` [`f`U`X`U`h`c`b`z` `W`]j`]`k` U`f`g` `U`b`X` `Y`h`b`]W`
j`]c` `Y`b`W` ` `5`h`h`Y` `g`U`a` Y` `h`a` Y`ž` `f`U`X`]h`c`b`U` `b`c`h`c`b`g` `c`Z`g`Y`W` f`]m`W`b`h`f`Y`X` `U`f`c`i` b`X` `h`Y` `g`h`U`h` ` `U`j` Y` `V`Y`Y`b`
W`X`U` `Y`b` [`Y`X` `V`m`U`X`j` c`W`h`Y`g` `c`Z` `i` a` U`b` `g`Y`W` f`]m`z` `Y`U`X`]b` [`h`Y` `Y`a` Y`f` [`Y`b`W` `c`Z`h`Y` ` `i` a` U`b` `g`Y`W` f`]m`U` [`Y`b`X`U` `k` ` `]W`X`
Z`c`W` `g`Y`g` `c`b` `h`Y` ` `i` a` U`b`]b`X`]]X`i` U` `U`g` `h`Y` `f`Y`Z`Y`f`b`h`z`c`f` `g`Y`W` f`]m`f` `H`c` `U`X`X` `h`c` `h`Y`g`Y`z` `h`Y`f`Y` `f`Y`a` U`]b` `f`U`X`]h`c`b`U`
g`Y`W` f`]m`V`c`b`W`f`b`g` `W`b`h`f`Y`X` `U`f`c`i` b`X` `k` U`f` `U`b`X` `W`c`b`z`]W`z` [`Y`c`g`h`f`U`h` []W`f`]j` U`f`]Y`g` `U`b`X` `U`f`a` g` `f`U`W`g` ` `M`c`i` `k`]`

6`YbXYX`YUfb]b[`YbWci fU[Yg`Xj Yfg]micZ`YUfb]b[`UWij]hYg`UbX`U`gc`Xj] Yfg]mi]b`UggYgga Ybh`H\]g
Wci fgY`Wcbg]gh`cZk YY_`mi&!`f`Uf[Y![fci d`YWi fYgzk YY_`m%`f`gYa]bUfgz`UbX`cb`bY`YUfb]b[`UWij]hYg
fY`Uh]b[`hc`X]ZYfYbhk YY_`mhc]d]Vg" H\Y`k YY_`m`YWi fYg`UfY`\][\`m]bhYfUWij Y`UbX`a Um]bWi XY`hY
dfYgYbhUhc]b`cZj]XYc`W]dgz`ga U`![fci d`UWij]hYgzk`fYUX]b[`[fci dgz`E / 5`gYgg]cbg`UbX`dU]f!k cf_`" H\Y
`YWi fYg`UfY`XYg][bYX`hc`gi dd`Ya Ybh]bXYdYbXYbhghi Xmc]b`hY`Wci fgY`hUhiVY[]bg`fVi hg\ci `X`bchYbXk
k]h`WcgY`Yb[U[Ya Ybhk]h`hY`k YY_`mi`fYei]fYX`fYUX]b[g"

K YY_`mhi hc]f]Ug`U`ck`gh XYbhg`hc`X]gW gg`ei Ygh]cbgz`hYa Yg`UbX`]ggi Yg`Uf]g]b[`Zca`hY]f`]bXYdYbXYbh
gh Xnz`Ug`k Y`Ug`dfcj]X]b[`hY`cddcfhi b]mhc`Yb[U[Y]b`dfcXi Wij Y`X]gW gg]cb`k]h`hY]f`dYYfg`UbX`hc
dUfh]V]dUhi`]b`U`fUb[Y`cZg]fi Wi fYX`YUfb]b[`UWij]hYgzk`bWi X]b[`[fci d`dU]f`#]bXj]Xi U`UbU`m]W`k cf_`z
Zca U`UbX`]bZca U`XYVUhi]gz`UbX`a]b]!`dfc`YVtg"

C b`]bYz`Zc`f`K YY_g`%`+z`mci `UFY`fYei]fYX`hc`Wci d`Yh`gdYW]Wcb`]bY`YUfb]b[`UWij]hYg`fC`@5`gk`Ug
]bX]WihX`cb`A ccX`Yz`VY`Zc`fY`mci `UhiYbX`hY`gYa]bUfg`Zc`f`hcgY`k YY_g`" H\YfY`]g`U`gc`U`fUb[Y`cZcb`]bY
fYgci fWg`gdYW]W]hc`YUW`k YY_`fj`hc]d]W]hc`Yb`UbW`]bXYdYbXYbh`YUfb]b["`=U`gc`dfcj]XY`U`bi`a`VYf`cZ
fYgci fWg`fY`UhiX`hc`gh Xmi]g_]`g`UbX`fYgYUfVX`"]hYfUWf"

5ggYgga Ybh

5ggYgga YbhHUG_g

5ggYgga YbhHUG_	K Y][\h	8i Y'8UH	Gh XYbh@YUfb]b[Ci hWta Yg'5ggYggYX
A YX]U'Ufh]WY#^c[()	%(#%\$#&\$%- '%%) - 'DA	(
9I Ua]bU]cb'))	Bch5dd']WUVY	%z&Z

5ggYgga Ybh8YHJ]g

5ggYgga Ybh% 'A YX]U'Ufh]WY#^c[

GHUfhXUH.

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

8YHJ]g. Gh XYbh]gi Va]hU'a YX]U'Ufh]WY#^c['hUh]XYbh]Zyg'UbX'YI d'cfYg'U'WcbhYa dcfUfmigYW f]hm]ggi Yz a cXY'YX'cb'hY'ghmY'cZU'a YX]U'ci hYhcf'V'c['cZhY]f'Wc]W''Gh XYbh]k]'fYW]j Y'k f]hYb'ZYXVUW'zU a Uf_YX'fi Vf]W'UbX'U'bi a Yf]W' [fUXY'k]h]b'&k YY_g'cZgi Va]gg]cb" H\Y'fi Vf]Wk]'VY'Uj U]UVY'Uh'hY ghUfhcZgYa Ygh'f'hc'U'ck 'gh XYbh]hc'k cf_'hc k UfXg'WYUf'mWta a i b]WUH'X'ghUbxUfXg'f%\$\$\$!k cfXgE"

5XX]h]cbU'XYHJ]g.

H\Y'Uja 'cZh]g'YI YfW]gY]g'hc'VY[]b'h]b_]b['UVci hX]ZYfYbhZcfa g'cZk f]h]b[z'UbX'hc'dfUW]W'k f]h]b['g\cfh' gi W]b]W'hWta a YbhUf]Yg'cb'WcbhYa dcfUfm]b]gYW f]hm]ggi Yg" Mci 'g\ci 'X'ZJa]]Uf]hY'mci fgY'Zk]h'hY_]bXg cZa YX]U'ci hYhg'UbX'V'c[g'hUh'f 'Zc'_g'k f]hY'ZcfzY" ["I BGK 'Dc]h]_a U[Un]bYz'hY'cd]b]cb'gYW]cbg'cZ FZW9gSd[S' zGA < z5i ghU'Ub'YhWUbX'V'c[g'gi W'Ug'FZW6 [ead'WdaXFZ['Yež6gU] aX? [WthSž >Si kWd' 9g' e S' V ? a' WkžUbX'FZW? a'] WkUSYWž

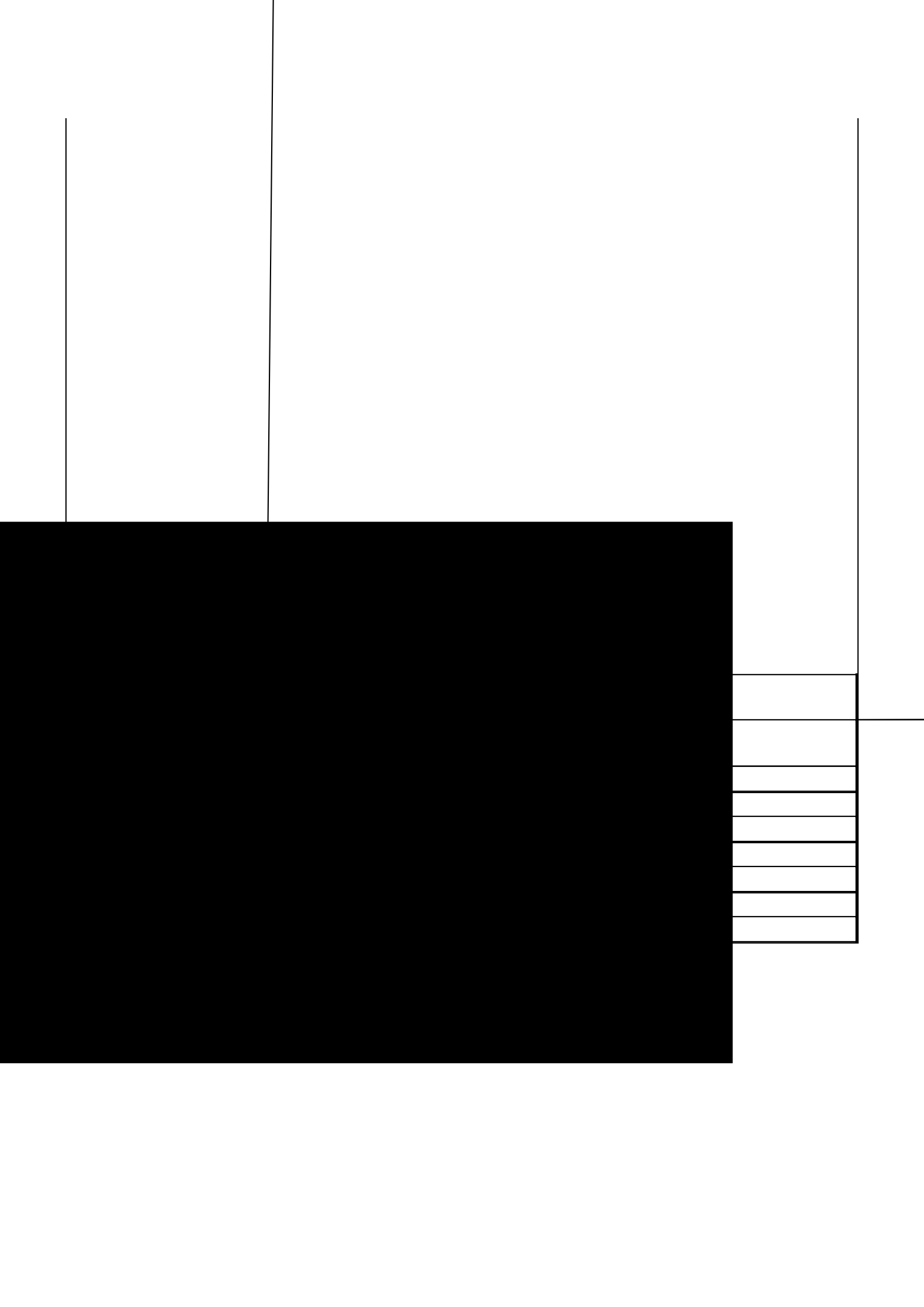
Mci f'gi Va]gg]cb'g\ci 'X'YI d']W]hm]Uf[YhcbY'cZhYgY'ci hYhg'z'UbX'UXXfYgg'U'WcbhYa dcfUfm['cVU']ggi Y]b'U'Zcfa Uh'hUha][\hVY'di V']g\YX'cb'mci f'd'UhZcfa 'cZWc]W''Mci '\Uj Y'ZY'Wc]W'cZhd]W'Ug'cb['Ug]h'f'Uh'g'hc'UbmcZhY'hYa Yg'cZhY'Wci fgY''Mci 'a i ghbc'h'Uh'hY'hc'd'cZhY'dU[Y'k \]W'ci hYh'mci UfY'Uf[Y]h]b["

GHUfhXUHY.

8YHUJ`g. 'H\Y`9I Ua]bUhc]b`]g`k cfh\`)) i `cZHY`cj YfU``a Uf_`Zcf`h]g`Wci fgY"8i fUhc]b.`&! \ci fg

5XX]hc]bU`XYHUJ`g.

A cfY`]bZcfa Uhc]b`k]``VY`a UXY`Uj U]UV`Y`cb`A ccX`Y"



F Ygci fWg

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

Gh XYbhYj U'i Uh] Y`ZYXVUW`]g[UhYfYX'dYf]cX]W`mi g]b[ž'Ua cb[`chYf'a YUbgž'hY'l b]j Yfg]m]g'A m
9l dYf]YbW`dfcWgg"= W Yf Y9l W g Ua

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 YbHgk`hc
]bWi XY`Ug`Yj]XYbW`hc`gi ddcfhmci f`YI H`bg]cb`Udd`]W]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 gZ`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[YgZ`UfhUbX`XYg][b`dfc`YWgZ`Ug`k Y`Ug
dfYgYbhU]cbg`k \YfY`gca YcbY`dfYgYbh]g`UbchYf`g]XYUg`cf`k cfXg`k]h`ci hW`YX]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`Z`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 hW`YX]h`UbX`hc
d]YW]b[`hc[YhYf`ei chYg`UbX`dUfUd`fUgYg`]bhc`U`bYk `k \c`Yz`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`XUHY`Zc`f`Zc`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'Ĥ'Y'ghUbxUfXg'cZVY\Uj]ci f'YI dY'W'X'cZYj Yfmcby']b'Ĥ'Y'I BGK 'W'a a i b]m
- 'cW'Ĥ'gYfj]W'g'UbX']bZ'fa U]cb'UVci hl BGK 'UbX'I BGK '@]VfUfm

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

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

