

ARTS2121

H\YUhfY `UbX`7 i ffYbh`9j Ybhg

HYfa `C.bY` `##`&\$%-

7ci fgY`Cj Yfj JYk

7 ci fgY'8YHJ]g

7 fYX]hDc]bHg '*

Gi a a UfmcZ\hY'7 ci fgY

Gi V'YWh5fYU. FZWSfdWS' V BWA_d_ S' UWE fgV[W

5 fhjghg 'U'k Umj'fYgdcB'hc 'hY 'jggi Yg'cZ\hY'f'ha Y''5bX'hYUhfY'a U_Yfg'UfY'cZ\hY'Zfghc'fYgdcB'k \Yb Ub 'jggi Y'Ya Yf[Yg''h'jg'Wci fgY'Z'mci 'k]''YI d'cfY '\ck 'Ufhjghg '\Uj Y'WfYUhfY'k cf_g'hUhYb[U[Y'Ui X]YbW'g]b'W ffYbhYj YbHg'UbX'WcbHYa dcfUfmiXYVUH'g''K]h'YUW']ggi Y'Z'mci 'k]''YI d'cfY 'jhg'gcW]U'cf][]bg'UbX'_Ym h'jg'Yfg'z'UbX'hY'a Y'h'cXg'hUh'hYUhfY!a U_Yfg'\Uj Y'i gYX'hc'fYgdcB'X''K]h'hY'g_]''g'mci 'XYj Y'cd'Z'mci k]''VY'UV'Y'hc'UbU'mgY '\ck 'hYUhfY!a U_Yfg']b'h'fj YbY']b'ci f'W'h'fY'UbX'XYj]gY'dYfZ'fa UbW'g'hUh Yb[U[Y'Ui X]YbW'g]b]ggi Yg'hUh'WcbW'fb'mci 'hcXUm'H\Y'U]a]g'hc'YUfb '\ck 'hY'k cf'X'k cf_g'k]h]b hYUhfY'UbX'\ck 'hYUhfY'k cf_g']b'hY'k cf'X''H\]g']g'U'W'cfY'@Yj Y'&'W'ci fgY']b'hY'H\YUhfY'UbX DYfZ'fa UbW'Gh X]Yg'ghfYUa ''

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

- % X]gW gg'hY'gdYW]YX'hYcfY]h]W'ZUa Yk cf_g'UbX'\ck 'hYm\Uj Y]bZi YbW'X'dYfZ'fa UbW'a U_]b[UbX'fYVWdh]cb/
- &''YI d'U]b'\ck 'hY'Ufhjgh]WUgY'gh X]Yg'Ya VcXmW'Ub[Yg]b'hY'Z'fa 'Z'WcbHYb'z'UbX'dc']h]W'cZ K Ygh'fb'dYfZ'fa UbW'g]bW'hY'% * \$g''
- ' '' UbU'mY'UbX'YI dYf]a Ybhk]h'WcbHYa dcfUfmdYfZ'fa UbW'UddfcUW'Yg'hc'hY' h'Z'gdUW'z'ha Yz dYfZ'fa]b['UbX'gdYVW]h]b[''
- (' UggYgg'hY'k Um'mci f'ck b'YI d'cg'fY'hc'WcbHYa dcfUfmi'hYcfm'UbX'dYfZ'fa UbW'dfUW]W' \Ug]a dUW'X'cb'mci f'UddfcUW'hc'hY'bU'h'fY'UbX'Z' bW]cbg'cZ']j Y'dYfZ'fa UbW'

HYUW]b['GhfUH[]Yg'

DYfZ'fa UbW'W]b'byj Yf'VY'X]j cfW'X'Z'ca]hg'gcW]U'z'W'h'fU'z'\]ghcf]W]z'UbX'a Uhf]U'W'fW'a gh'UbW'g'' <YbW'hc'gh'XmU'dYfZ'fa UbW'hY'h]g'hc'gh'Xm]hg'WcbHY'h'hc''H\YgY'k]b'fUg_g'z'hc'YUfb'\ck 'hc'fYUX'hY'hg UbX'WcbHY'hg'z'fYei]fY'a i' h'd'Y'a Y'h'cXg'z'gca Y'h'UW'Yf]X]fYW'X'UbX'gca Y'gh'XYbh'YX''H\]g'W'ci fgY'i gYg U'W'ca V]bU]h]c'b'cZ'YV'h'fYg'k]h'g'W'Yb]b[g'z'h'hc'f]U'g'z'UbX'U'ZUW]h]U'X'W'YU]j Y'dfcW'gg'UbX'dfYgYb]h]c'b''h'UXX]h]c'b'z'gh'XYbHg'UfY'YI dYV'X'hc'k cf_]b'XYdYb'XYbh'z'ci hg]XY'cZ'WUgg'h]a Y'z'fYUX]b['z'fU_]b['b'ch'g'z'k U'h]b[]j]X'Yc'W]dg'z'd'Ubb]b['dfUW]W'U'W]j]h]Yg'z'UbX'U'h]b'X]b[''j Y'dYfZ'fa UbW'g''H\Y'Y'W'h'fYg'Y'h'ci h [YbYfU'hYcfY]h]W'ZUa Yk cf_g'UbX']b'f'cXi W'dUf]W'Uf'hYUhf]W'k cf_g''H\Y'h'hc'f]U'g'UfY'cd'c'f'h]b]h]Yg Z'f'hY' [fci d'hc'X]gW'gg'UbX'fYZYW'cb'hYgY'W'cbW'dhg'UbX'W]gY'gh'X]Yg'Ug'k Y''Ug'hc'Xc'gca Y'dfUW]W'YI Yf]gYg'UbX'YI dYf]a YbHg'' : cf'k'c'k Y'Y_g']b'hY'U'f'f'dUf'hc'Z\hY'W'ci fgY'z'hY'Y'W'h'fY'UbX'h'hc'f]U'g'UfY fYd'UW'X'Vmgh'XYbh'YX'z'W'YU]j Y'dfcW'gg'UbX'dfYgYb]h]c'bg''H\]g'XYj Y'cd'g'hY'f'Uk UfYbYgg'cZ'hY'f'ck b UV]h]Yg'UbX'fYgdcB]V]h]Yg'Ug'W'h'fU'd'f'cXi W'f'g''

FZWSfdWS' V 5gdW f 7hW fe'YI h'YbXg'_bck 'YX[Y'cZV'ch'hYUhfY'gh'X]Yg'z'Ug'W'ci YfYX']b'hY' [U'h'k Um W'ci fgY'3DFE##\$''7j bW]W U[Y FZWSfdW'UbX'dYfZ'fa UbW'gh'X]Yg'z'Ug'W'ci YfYX']b'hY' [U'h'k UmW'ci fgY' 3DFE##\$# FZW>[XVaXBWA_d_ S' UW' h'YI h'YbXg'hY'W'ff]W'U'cZ\hYgY'W'ci fgYg'VmZ'W'g]b['cb'U]j Uf]Y'micZ dYfZ'fa UbW' [Yb'f'g'z]b'W'i X]b['X'f'Ua U]h]W'd'Um'g'z'c'g'h'f'Ua U]h]W'h'YUhfY'z'dYfZ'fa UbW'Uf'z'UbX'gh'UbX!i d W'ca YXm' h]b]h] [fU'h'g'g'Y'Z'fYZYI]j Y'UbX'dYfZ'fa U]h] Y'YUfb]b['UbX'h'UW]b['gh'fUH[]Yg']b'V'ch'd'YXU[c[m UbX'UggYgga Ybh'

5ggYgga Ybh

D`YUgY`i gY`hY`7`\\]WJ[c`5i`h`c`f`8`UH`f`Y`Z`f`Y`b`W]b[`g`m`g`h`Y`a` `f`%`+`h` `Y`X`]`h`c`b`E`

H`\\`Y` `E` i`]`W`_` ;` i`]`X`Y` `]`g` `U`j` U`]`U`V` `Y` `\\`Y`f`Y` `.`

[\\hd.##k k k "VX\]WJ\[ca Ubi U`c`Z`g`m`Y`"cf\[#cc`g`S`W`h`h`c`b\[i \]X`Y`#`V`h`h`c`b\[i \]X`Y`!`&`"h`a` `.`](#)

H`\\`Y` `: `i` `";` i`]`X`Y` `]`g` `U`j` U`]`U`V` `Y` `j`]`U` `h`Y` `I` B`G`K` `@`]`V`f`U`f`m`

[\\hd.##k k k "VX\]WJ\[ca Ubi U`c`Z`g`m`Y`"cf\["k k k dfcl n%":\]V`f`U`f`m`i` b`g`k` "Y`X`i` "U`i` #`/`c`c` #`X`%`+`#`f`c`b`h`a` U`h`Y`f`#`c`W`h`a` `.`](#)

5ggYgga YbhHUg_g`

5ggYgga YbhHUg_	K Y][\ h	8i Y`8UH`	Gh XYbh@YUfb]b[Ci hW`a Yg`5ggYggYX
5bU`m`h]W`U`9b[U[Ya Ybh) \$i	`, #`\$` `#`&`\$`%`- `Ub`X` `&`- #`\$` `#`&`\$`%`-	%`z`&`z` z`(`
; fci d`d`Y`f`z`c`f`a UbW` `	&) i	%`+`#`\$` (`#`&`\$`%`- `'\$`- .`\$`\$` `5`A	%`z`
F YZYW`h`j` Y`9ggUm	&) i	&`*` #`\$` (`#`&`\$`%`- `'%`%)` - `D`A	%`z`(`

5ggYgga Ybh8YhU]`g`

5ggYgga Ybh%`5bU`m`h]W`U`9b[U[Ya Ybh

GHUfhXUH` `.`

8YhU]`g. `&`!` `%`\$`\$`!`%`&`) \$`k` c`f`X`g;` f`U`X`Y`z`F` i` V`f`]`W`U`b`X` `7`c`a` a` Y`b`h`

5XX]h]c`b`U` `X`Y`h`U]`g`.

D`YUgY` `b`c`h`Y` `h`U`h`h` `]`g` `U`g`g`Y`g`g`a` Y`b`h`W`c`b`g`]`g`h`g` `c`Z`h`k` `c` `Y`g`g`U`m`g` `c`Z`%`\$`\$`\$`!`%`&`) \$`k` c`f`X`g` `Y`U`W`X` " `H`\\`Y` `]`f`g`h`]`g` `X`i` Y` `U`h` `h`Y` `Y`b`X` `c`Z`K` `Y`Y`_` " `z`c`b` :` f`]`X`U`m`z` ,` `A` `U`f`W`X` `&`\$`%`- `V`m`%`%`)` -`d`a` " `H`\\`Y` `g`Y`W`c`b`X` `]`g` `X`i` Y` `U`h`h`Y` `Y`b`X` `c`Z`K` `Y`Y`_` `*` `z`c`b` :` f`]`X`U`m`z` &- `A` `U`f`W`X` `&`\$`%`- `V`m`%`%`)` -`d`a` "

5ggYgga Ybh%`%`"K` f`]`h`Y` `U` `%`\$`\$`\$`!`k` c`f`X` `U`b`U`m`g`]`g` `c`Z`c`b`Y` `f`Y`W` `b`h`Z`Y`a` `]`b`]`g`h`d`Y`f`z`c`f`a` UbW` `f`z`c`a` `h`Y` `Y` `]`g`h`c`Z`W`U`g`Y` `g`h`i` X`]`Y`g` `d`f`c`j` `]`X`Y`X` `]`b` `W`U`g`g`t` " `F` i` V`f`]`W`]`b`X`]`W`h`]`b` [" `Y`j` Y` `c`Z`d`Y`f`z`c`f`a` UbW` `U` [`U`]`b`g`h`Y`U`W`X` `U`g`g`Y`g`g`a` Y`b`h`W`]`h`Y`f`]`U`z` `k` f`]`h`Y` `b` `z`c`f`a` U`h`j` Y` `Z`Y`X`V`U`W`_`z` `U`b`X` `d`Y`f`W` `b`h`U` [`Y` [`f`U`X`Y` " `8`i` Y` `U`h`h`Y` `Y`b`X` `c`Z`K` `Y`Y`_` " `z`c`b` :` f`]`X`U`m`z` ,` `A` `U`f`W`X` `&`\$`%`- `V`m`%`%`)` -`d`a` "

5ggYgga Ybh%`&`"K` f`]`h`Y` `U` `%`\$`\$`\$`!`k` c`f`X` `U`b`U`m`g`]`g` `c`Z`c`b`Y` `f`Y`W` `b`h`d`c`g`h`c`b`]`U` `d`Y`f`z`c`f`a` UbW` `f`z`c`a` `h`Y` `Y` `]`g`h`c`Z` `W`U`g`Y` `g`h`i` X`]`Y`g` `d`f`c`j` `]`X`Y`X` `]`b` `W`U`g`g`t` " `F` i` V`f`]`W`]`b`X`]`W`h`]`b` [" `Y`j` Y` `c`Z`d`Y`f`z`c`f`a` UbW` `U` [`U`]`b`g`h`Y`U`W`X` `U`g`g`Y`g`g`a` Y`b`h`W`]`h`Y`f`]`U`z` `k` f`]`h`Y` `b` `z`c`f`a` U`h`j` Y` `Z`Y`X`V`U`W`_`z` `U`b`X` `d`Y`f`W` `b`h`U` [`Y` [`f`U`X`Y` " `8`i` Y` `U`h`h`Y` `Y`b`X` `c`Z`K` `Y`Y`_` `*` `z`c`b` :` f`]`X`U`m`z` &- `A` `U`f`W`X` `&`\$`%`- `V`m`%`%`)` -`d`a` "

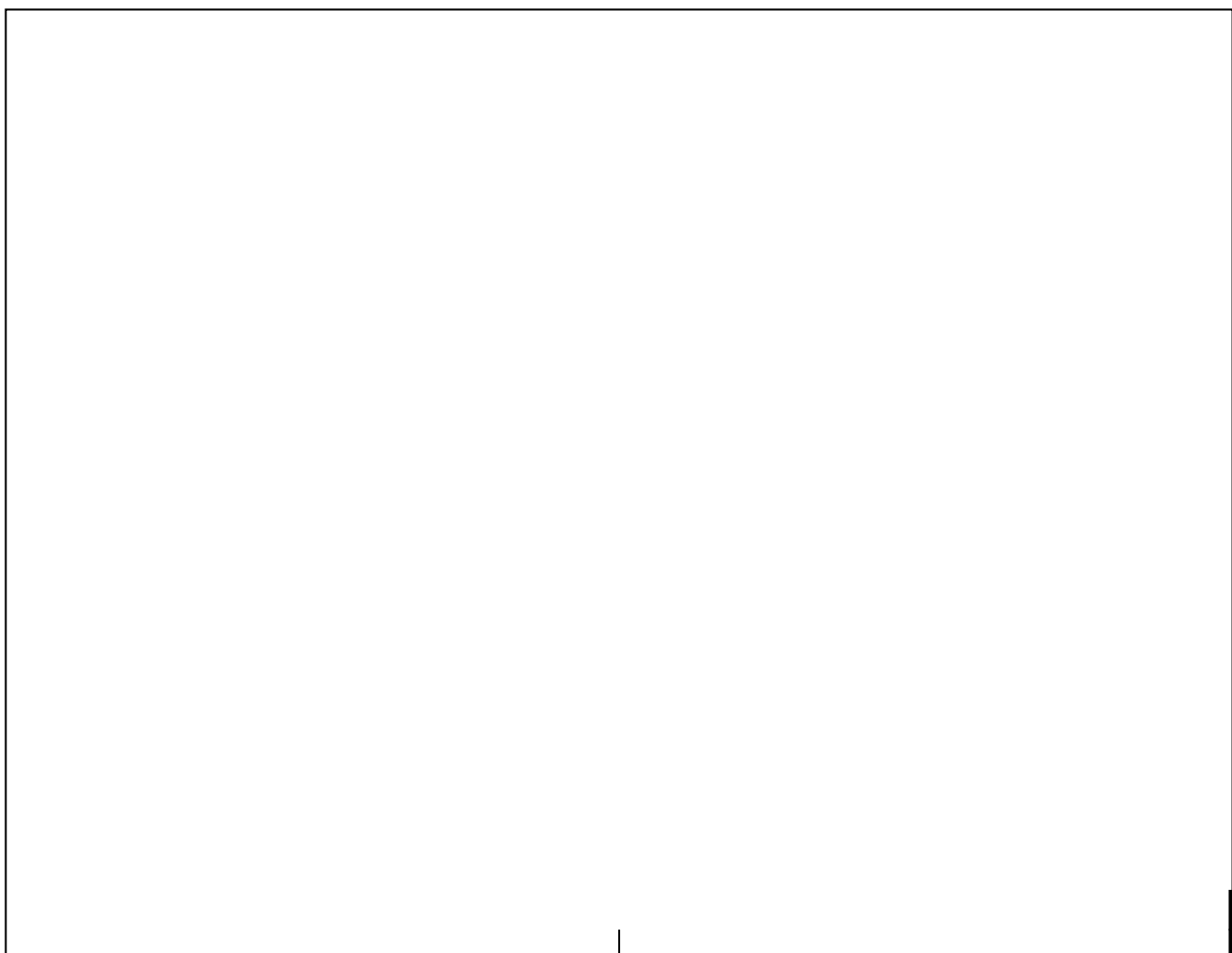
Hi`fb`]`h`]`b` `g`Y`h`]`b` [. `H`\\`g` `U`g`g` [`b`a` Y`b`h`]`g` `g`i` V`a` `]`h`Y`X` `h`f`c`i` [`\\` `H`i`fb`]`h`]`b` `U`b`X` `g`h`i` X`Y`b`h`g` `X`c` `b`c`h`g`Y`Y` `H`i`fb`]`h`]`b` `g`]a` `]`U`f`]`m`i`f`Y`d`c`f`r`g`"

5ggYgga Ybh&` `;` fci d`d`Y`f`z`c`f`a UbW` `

GHUfhXUH` `.`

8YHJ`g. %\$`a]bi h`g; fUXYZF i Vf]W`UbX`7 ca a Ybh

5XX]h`cbU`XYHJ`g.



	Hi hcf]U`	C bY` \ci f`X]gW gg]b[`dYfZcfa UbW` W]gY` gh X]Yg/ cbY` \ci f`cZdYfZcfa UbW` YI YfW]gYg"
K YY_ ; . ; `5df]`!`%(`5df]`	@YVh fY	F Y\YUfgU` `Zcf` ; fci d`DYfZcfa UbW`
	Hi hcf]U`	F Y\YUfgU` `Zcf` ; fci d`DYfZcfa UbW`
K YY_ - . % `5df]`!`&% 5df]`	@YVh fY	; fci d`DYfZcfa UbW`g`
	Hi hcf]U`	: YYXVUW_ `cb` ; fci d`DYfZcfa UbW`g
	5ggYgga Ybh	5ggYgga Ybh& . ; fci d`DYfZcfa UbW` Xi Y` Xi f]b[`hY `YVh fY`g`chz]`Y" `K YXbYgXUmz`%+ `5df]`&\$%- `Uh- `Ua "
K YY_ %\$. `&&`5df]`!`&, 5df]`	5ggYgga Ybh	5ggYgga Ybh' . F YZYW]j Y`9ggUmXi Y`cb` : f]XUmz`&` 5df]`&\$%- `Vm%`%) - `da "

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

H\Y`gYhfYUX]b[g`UfY`Uj U]UV`Y`i]b`h\Y`Wci fgY`A ccX`Y`g]h`UbX`j]U`h\Y`i` B GK `a U]b`]]VfUfm`H\YfY`]g`bc
Gh Xmi?]hZcf`h`g`Wci fgY"

F YWca a YbXYX`F Ygci fWg

Gi Va]gg]cb`cZ5ggYgga YbhHUg_g

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≠mci`YbWci bhYf`U`dfcV`Ya`k`Yb`U`H`Ya`dh]b[`h`c`gi`Va`]h`m`c`i`f`U`g`g`[`ba`Y`b`h`h`f`c`i`[`\`H`i`f`b`]h]b`z`d`Y`U`g`Y`
H`Y`d`\`c`b`Y`9`I`H`f`b`U`G`i`d`d`c`f`h`c`b`-`,`),`"`,`'`,`%`c`f`Y`a`U`]`h`Y`a`c`b`Y`I`H`f`b`U`H`h`g`i`d`d`c`f`h`4`i`b`g`k`"Y`X`i`"U`i`"Gi`d`d`c`f`h`
\`c`i`f`g`U`f`Y`,`.\$`\$`U`a`-`-%`\$`.\$`\$`d`a`c`b`k`Y`Y`_`X`U`m`g`U`b`X`-`.\$`\$`U`a`-`i`).`\$`\$`d`a`c`b`k`Y`Y`_`Y`b`X`g`f`l`*)`X`U`m`g`U`m`Y`U`f`l`"≠mci`
U`f`Y`i`b`U`V`Y`h`c`gi`Va`]h`m`c`i`f`U`g`g`[`ba`Y`b`h`X`i`Y`h`c`U`Z`U`i`h`k`]h`H`i`f`b`]h]b`m`c`i`a`U`m`i`U`d`d`m`i`Z`c`f`U`b`Y`I`H`f`b`g`]c`b`z`V`i`h`m`c`i`
a`i`g`h`f`Y`h`U`]b`m`c`i`f`h]W`Y`h`b`i`a`V`Y`f`Z`c`a`9`I`H`f`b`U`G`i`d`d`c`f`h`f`U`c`b`[`k`]h`U`b`m`c`h`Y`f`f`Y`j`U`b`h`X`c`W`a`Y`b`h`g`k`h`c`
]b`W`i`X`Y`U`g`Y`j`]X`Y`b`W`h`c`gi`d`d`c`f`h`m`c`i`f`Y`I`H`f`b`g`]c`b`U`d`d`]W`h]c`b`"≠mci`Y`a`U`]9`I`H`f`b`U`G`i`d`d`c`f`h`m`c`i`k`]"`

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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`mWc`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[Ygž UfhUbX`XYg][b`dfc`YWgž`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`U`b[]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 hW`YX]h`UbX`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'j]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'Y'fg'k]''VY'bYk "'; U]b]b['U'gc`]X'i bXYfghUbx]b['cZU''h'Y fY'U'h'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'Y'g"'\]VfUfm'i bgk "Y'X'i "U'i #' \]gY#\]V'ci 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`Vc]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

[\hfdg.#k k k "Ufmg"i bgk "YXi "Ui #W ffYbh\]ghi XYbh\]bZcfa Uh\]cb`dfc\]Vc`g!\[i \]XY`\]bYg#](#)

⇒ U[Y`7 fYX]h