



ARTS3270

F YZYW]b['cb' <]ghcf]Yg'UbX' <]ghcf]Ubg. '7 UdghcbY

HYfa 'Hk c''##'&\$%-

7ci fgY`Cj Yfj JYk

`GHUZZ7cbhUWhi8YHU]`g`

`7cbj Ybcfg`

B Ua Y	9a U]`	5j U]UV]]m	@cWU]cb	D\cbY
: fY[cfm9j cb	["Yj cb4 i bgk "YXi "Ui	6mUddc]bħa Ybh	A 6 `&' '	- ' ,) `&(- &

GW\cc``7cbhUWhi`bZcfa Uh]cb

GW\cc``cZ<i a Ub]hYg`UbX`@Jb[i U[Yg

@cWU]cb. `GW\cc``C Z]WžA cfj Yb`6fck b`6i]X]b[ž@Yj Y``&ž&),

CdYb]b[`<ci fg. A cbXUm! : f]XUmž- Ua `!') da

D\cbY. Ž*%&'- ' ,) `%, %

: UI. Ž*%&'- ' ,) ; , +\$)

9a U]: [\U`4 i bgk "YXi "Ui](#)

YUfbYX`j]b`hY`\\]g]hcfma U`c`fz`UbX`hc`d`Ub`UbX`YI`YW`H`mci`f`fYgYUfW`d`fc`YVW`H`\\]g`V`ei`fgY`]g`XYg][`bYX`hc`
a`U`_`Y`<`]g]hcfma U`c`fg`Uk`UfY`cZU`fUb[`Y`cZ]a`dcffUbhUddfcUWXYg`hc`k`f]h]b[`\\]g]hcfmz`UbX`U`gc`hc`h`Y]f`fc`Y`
Vch`j]b`g`\\Ud]b[`ci`f`i`bXYfghUbX]b[`h`Y`d`UghUbX`j]b`a`chj`U]b[`d`fYgYbhUW]cb""`#`YUWX`k`YY`_`mci`k`j`
X]gW`gg`U`d`Ufh]W`Ufz`W`ffYbhghmY`cZ`\\]g]hcfmicf`UW]j`]mciZ`\\]g]hcf]Ubgz`hc[`Y`h`Y`f`k`]h`]hg`gcW]U`j]a`d`]W]h]cbg""`#`
h`Y`g`Ya`j]b`Uf`g`Y`gg]cbgzei`Ygh]cbg`UVci`h`h`Y`f`Y`UX]b[`g`k`j`V`Y`X]gW`ggYX`j]b`ga`U`[`fci`dgz`UbX`h`Y`b`mci`f`
Ubgk`Yfg`g`\\UfYX`Ua`cb[`h`Y`k`\\c`Y`WUgg/Uh`h`Y`Y`b`X`U`Z`k`c`Z`h`Y`g`Y`g`Ua`Y`ei`Ygh]cbg`k`j`V`Y`[`]j`Yb`Ug`U`D`#`
ei`]n`]b`cfXYf`hc`a`chj`U]h`f`Y`UX]b[`UbX`Yb[`U[`Ya`Y`bh]b`h`Y`X]gW`gg]cb""`Hc`j]a`d`Ufh]bg][`\\h]b]h`\\]g]hcfm]g`gcW]U`
fc`Y`z`h`Y`f`Y`k`j`V`Y`Ub`YI`Y`f`W]gY`f`Y`ei`]f]b[`mci`hc`U`h`Y`b`X`c`b`Y`c`Z`U`Z`k`X`Y`g][`b`U`h`X`a`i`g`Yi`a`YI`\\]V]hg`UbX`hc`
Ub`U`mgY`]hg`f`Y`d`f`Y`g`Y`b`h]cb`c`Z`h`Y`d`Ugh`V`ch`j]b`h`Y`fa`g`c`Z`h`Y`\\]g]hcf]W]`g`W`c`U`fg`\\]d`c`b`k`\\]W`j]h]g`V`U`g`Y`X`z`Ub`X`
c`Z`h`Y`X`Y`a`Ub`X`g`d`U`W`X`c`b`\\]g]hcfm]Vmi]hg`di`V`]W]g`UbX`j]bgh]h`h]cbg""`H`\\]g`a`i`g`Yi`a`Y`gg`Um`U`gg][`ba`Y`b`h`a`Um`V`Y`
V`c`a`d`Y`h`X`j]b`V`c`U`V`c`f`U]h]cb`k`]h`U`b`c`h`Y`f`g`h`X`Y`b`h`z`Y`b`U`V`]b[`mci`hc`g`\\U`f`Y`]bg][`\\hg`UbX`hc`Ya`d`c`mi`h`Ua`k`cf`_`
]b`YI`d`c`f]b[`UbX`X`c`W`a`Y`b]h]b[`a`i`g`Yi`a`gd`U`W`""`j]b`U`m`z`]b`U`f`Y`g`Y`U`f`W`Y`gg`Um`d`f`c`Y`W`z`mci`k`j`YI`d`Y`f]Y`b`W`
h`Y`V`U`g]W]h]Ug`_`c`Z`h`Y`\\]g]hcf]W]`W`U`Z`z`W`Y`U]h]b[`U`ei`Y`gh]cb`UbX`V`c`b`g`h`f`i`W]b[`Ub`U`W`V`c`i`b`h`c`Z`d`U`gh`Y`j`Y`b]g`
V`U`g`Y`X`c`b`Y`j`X`Y`b`W`mci`a`i`gh`X]g`V`c`j`Y`f`z`c`f`mci`fg`Y`Z`-`]b`W`i`X]b[`h`Y`i`g`Y`c`Z`d`f]a`U`f`m`g`c`i`f`W`X`c`W`a`Y`b`hg`!!`
h`i`g`Y`U`fb]b[`Z]f`gh`\\UbX`h`Y`d`f`c`W`gg`Y`g`UbX`V`c`b`g`h`f`U]b]hg`g`\\Ud]b[`ci`f`d]W]h`f`Y`g`c`Z`h`Y`d`Ugh`

ggYgga Ybh

ggYgga YbhHUg_g'

>i gh]W`UbX`Dc`]W`A i gYi a `fk YY_YbXg`cb`nt

- 7]micZG\UXck g. `əbYf`7]m7 f]a Y / `A UmYa `%- %&!%- (,

BUh]cbU`A Uf]h]a Y`A i gYi a .`

- DUggYb[Yfg. `H\Y`@cb[`GYU`J cmU[Y`hc`U`BYk `@UbX
- H\Y`8Uf]b[`G\]d. `H\Y`g`hc`fmcZ<A 5G`J cmU[Yf"

5i ghfU`]Ub`A i gYi a .`

; Uff][UffU]b[.`GYU`7 ci bfmfB 6. `h\]g`YI \]V]h]g`dUfhm`\]g`hc`f]W`UbX`dUfhm`U`b`h`f`c`d`c`c[]W`Z`gc`Z`c`W`g`cb`h`Y`\]g`hc`f]W`Y`Ya Yb]g

Hi fb]h]b`gYh]b[. `H\]g`Ugg][ba Ybh]g`gi Va]h]X`h`fci [\ `Hi fb]h]b`UbX`gh XYbh]g`Xc`b`ch]g`YY`Hi fb]h]b`g]a]Uf]mifYdcf]g"

5ggYgga Ybh' . `F YgYUfW`9ggUm

GHUfhXUH. `Bch5dd`]WVY

@Yb[h. `&) \$\$`k`cfXg

8YhU]`g. `&) \$\$`k`cfXg`a]b`za i ghYa`d`cmdf]a Ufm]gci`fW]g""Bi a Yf]W`a Uf`_`UbX`W`a a Yb]g`Ug`ZYXVUW`_`cb`h`Y]f`YggUm]g"") \$i `]bW`XYg`) `dc]b]g`Z`c`f`U`dfY`]a]bUfmC`i`h]bY`#`f`c`d`c`g`U`k`c`f`h`) | ""`H\]g`]g`h`Y`Z]bU`UggYgga YbhZ`f`U`h]bX`UbW`di`f`d`c`g`Y`g"

5XX]h]cbU`XYhU]`g.

F Yei]fYa Yb]g`Z`c`f`h`Y`F YgYUfW`9ggUmik]`VY`X]gW`ggYX`]b`h`Y`K`YY`_%`GYa]bUf`z`k]h`UXX]h]cbU`]bZ`fa U]cb`d`c`g`h`X`cb`A`cc`X`Y"

Hi fb]h]b`gYh]b[. `H\]g`Ugg][ba Ybh]g`gi Va]h]X`h`fci [\ `Hi fb]h]b`UbX`gh XYbh]g`Xc`b`ch]g`YY`Hi fb]h]b`g]a]Uf]mifYdcf]g"

Gi Va]gg]cb`cZ5ggYgga YbhHUg_g

Gi Va]gg]cb`cZ5ggYgga YbhHUg_g

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

≠mci`YbWci bHYf`U`dfcV`Ya`k`Yb`U`HYa`dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybh`h`fci`[`\`Hi`fb]h]b`z`d`YUgY`
HY`Yd`cbY`9I`HYfbU`Gi`ddcfhcb`-`,`)`'`'`'`%cf`Ya`U]`h`Ya`cb`YI`HYfbU`HY`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`mY`UfL`≠mci`
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhXi`Y`hc`U`ZU`hik`]h`Hi`fb]h]b`mci`a`Um`Udd`mi`Zc`f`Ub`YI`HYbg]cb`z`Vi`hmc`i`
a`i`ghfY`hU]b`mci`f`h]W`Yhbi`a`VYf`Zca`9I`HYfbU`Gi`ddcfhfU`cb[`k`]h`Ubmc`h`Yf`fY`Yj`UbhXcW`a`Yb`hg`L`hc`
]bWi`XY`Ug`Yj`]XYbW`hc`gi`ddcfhmc`i`f`YI`HYbg]cb`Udd`]W]h]cb"≠mci`Ya`U]`9I`HYfbU`Gi`ddcfhmc`i`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 gž`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[Ygž`UfhUbX`XYg][b`dfc`YWgž`Ug`k Y`U`g
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`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[Y`hYf`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'Wcdmf][\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 'Wca a i b]m
- `cWJh'gYfj]Wg'UbX'j]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'YWf i \]XYg" \]VfUfm'i bgk "YXi "Ui #` \]gY#JVci h' \]gY](#)

5 WUXYa]WbZcfa Uh]cb`

: cfYggYbh]U`ghi XYbh]bZcfa Uh]cb`fY`Uh]b[`rc.

- fYei Ygh]Zc`fYI hYbg]cb/
- `UhY`gi Va]gg]cbg`[i]XY`]bYg/
- fYj]Yk `cZa Uf_g/
- I BGK `<YU`h`UbX`GUZY`midc`]WYg/

