



ARTS3810

Dc`j]Wg/`'bHYfbUjcbU`F Y`Uhjcbg.`H\YcfmiUbX`DfUWjW

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

GWcc`cZGcWJU`GWYbWg`#`I BGK`5ffg`UbX`GcWJU`GWYbWg

7 ci fgY`Cj Yfj]Yk`

GhJZZ`7 cbhJWw`8 YhJ]`g

7 cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`]m	@cWWhcb	D\cbY
B]Wxc`Ug`5dc]Zg	b"Udc]Zg4 i bgk "YXi "Ui			

GWcc``7 cbhJWw`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]bhg`*`

Gi a a UfmcZh\Y'7ci fgY

Gi VYWh5fYU. Ba^ff[ue S`V ;` fWd Sf[a` S^DWSf[a` e

5ggYgga Ybh

5ggYgga YbhHUg_g`

5ggYgga YbhHUg_	K Y][\h	8i Y'8UH	Gh XYbh@YUfb]b[Ci hWta Yg'5ggYggYX
; fci d'Dfc YW	' \$l	Bch5dd']WVY	&Z ž(ž)
5gg][ba Ybh	(\$l	Bch5dd']WVY	&Z*
A YX]U'Ufh]WY#6`c[`	' \$l	Bch5dd']WVY	%Z*

5ggYgga Ybh8YHJ]`g

5ggYgga Ybh% ; fci d'Dfc YW

GHUfhXUH. `

8YHJ]`g.

; fci dg'gi Va]hU')!dU[Y'dfc YWdfcdcgU""H\]g]g'U'[fci d'Ug_"5""gh XYbhg]b'hY [fci d'k]""fYW]j Y'hY gUa Y' [fUXY'Zcf'hY'Ugg][ba Ybh'Gh XYbhg'UfY'Ug_YX'hc'fUH'hY]f'Z'`ck [fci d'a Ya VYfgfdUfh]WdUhcb'UbX Wcb]f]Vi h]cb'cb'U'gWU'Y'cZ%l%\$'i'g]b['U'WcbZ]XYbh]U'`cb]bY'gi fj Ym'Z'Ubm[fci d'a Ya VYf]d'Ufh]WdUhcb UbX'Wcb]f]Vi h]cb]g'fUH'X'`ck Yf'hU'ub'+ fVmg]h XYbhg'cf'hY'Wci fgY'Wcbj Ybcf'hY'Yb'hY]f' [fUXY'k]""VY a cXYfUH'X'UVWcf]X]b['mVmi'hY'Wcbj Ybcf""H\]g'k]""VY WYUf'mWca a i b]WUH'X'hc'gh XYbhg'Uh'hY'ghUfhcZ gYa Ygh'f""H\Y'Z]bU'dfcdcgU'g'k]""VY'gi Va]hY'X'h'fci [\ 'a ccX'Y'UbX'gh XYbhg'k]""fYW]j Y'k f]hY'b ZYXVUW_ UbX'U'a Uf_YX'fi Vf]Wk]h]b'hY'b'k cf_]b['XUmg'cZgi Va]gg]cb"

5ggYgga Ybh& '5gg][ba Ybh

GHUfhXUH. `

8YHJ]`g.

Mci 'k]""gi Va]hU'&\$\$\$!k cfX'fYgYUfW'YggUm'E i Ygh]cbg'UfY'gYhVmi'hY'Wci fgY'Wcbj Ybcf""Mci 'k]""fYW]j Y k f]hY'b'ZYXVUW_ UbX'U'bi a Yf]W' [fUXY'k]h]b'hY'b'k cf_]b['XUmg'cZgi Va]gg]cb""H\Y'ZYXVUW_ g\YYh'fi Vf]Wk]""VY'Uj U]UV'Y'hc'mci 'Uh'hY'ghUfhcZ'hY'Wci fgY'gc'hUhmci 'WU'b'k cf_'hc'k UfXg'gdYW]Z]YX ghU'XUfXg

5ggYgga Ybh' . A YX]U'Ufh]WY#6`c[`

GHUfhXUH. 'Bch5dd']WVY

8YHJ]`g.

Gh XYbhg'gi Va]hU'% \$\$!k cfX'k f]hY'b'Ugg][ba Ybh'a cXY""YX'cb'hY'g]mY'cZU'a YX]U'ci hYhcf'V'c['cZ'hY]f Wc]W""Gh XYbhg'k]""fYW]j Y'k f]hY'b'ZYXVUW_ UbX'U'a Uf_YX'fi Vf]Wk]h]b'hY'b'k cf_]b['XUmg'cZ

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

BchiUj UjUV`Y

F YWca a YbXYX`F Ygci fWg

BchiUj UjUV`Y

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

Gi Va]gg]cb`cZ5ggYgga YbhiHUg_g

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

≠mci`YbWci bHYf`U`dfcV`Ya`k` \Yb`UHYa` dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhiHfci`[`\`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`
`lci`fg`UfY`,`.\$\$Ua`-`-%\$.\$\$da`cb`k`YY`XUmg`UbX`-`.\$\$Ua`-`).\$\$da`cb`k`YY`YbXg`f1`*)`XUmg`U`mY`Uf2`≠mci`
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhiXi`Y`hc`U`ZU`ihk`]h`Hi`fb]h]b`mci`a`UmUdd`mZc`f`Ub`YI`HYbg]cb`z`Vi`hmc`i`
a`i`ghfYhU]b`mci`f`h]W`Yhbi`a`VYf`Zca`9I`HYfbU`Gi`ddcfhfU`cb[`k`]h`Ubmc`h`Yf`fY`Yj`UbhXcW`a`Ybhtg`L`hc`
]bWi`XY`Ug`Yj`]XYbVW`hc`gi`ddcfhmc`i`f`YI`HYbg]cb`Udd`]W]h]cb`"≠mci`Ya`U]`9I`HYfbU`Gi`ddcfhmc`i`k`]`
Ui`hca`UH]WU`mifYW]j`Y`U`h]W`Yhbi`a`VYf`z`Vi`h]Zmci`HY`Yd`cbY`mci`k`]`bYYX`hc`gdYW]Z]WU`mUg`Zc`f`cbY`
Hi`fb]h]b`U`gc`dfcj`]XYg`i`dXUH`g`cb`h`Y]f`gmghYa`ghU`h`g`cb`Hk`]hYf`"

;`YbYfU`mz`UggYgga`YbhiUg_g`a`i`ghVY`gi`Va`]hYX`Y`YWfcb]WU`mj`]U`Y]h`Yf`Hi`fb]h]b`cf`U`A`ccX`Y`
Ugg][`ba`Ybhi`h`]bghU`bVW`g`k` \YfY`h`lg`]g`bchidcgg]V`Yz`]hk`]`VY`ghU`h`X`cb`mci`f`Wci`fgY`g`A`ccX`Y`g]h`k`]h`
U`HYfbU]h]`Y`gi`Va`]gg]cb`XYhU]g`"

:`cf]bZcfa`Uh]cb`cb`lck`hc`gi`Va`]hUgg][`ba`Ybhtg`cb]bY`j`]U`A`ccX`Y`.`h`hdg`#gh`XYbhi`bgk`"YXi`"Ui`Ack`!
gi`Va`]hUgg][`ba`Ybhta`ccX`Y`"

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`B`G`K` `[`f`c`i`d`g`d`U[]Uf]ga `]b`h`c` `h`Y` `Z`c` `c`k`]b[`W`U`h`Y`[`c`f`]Y`g.

- 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'j]b'h'Y'I BGK 'Wca a i b]m
- `cWJh'gYfj]W'g'UbX'j]bZ'fa U]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](#)

