



ARTS2050

5WUXYa]WK f]h]b['Zcf'h\Y' < i a Ub]h]Yg

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

GWXcc``cZHAY'5ftg'UbX'A YX]U'`# 'I BGK ``5ftg'UbX'GcWU'`GWYbWYg

7ci fgY`Cj Yfj]Yk

GHJZ`7cbHJW`8YHJ]`g

7cbj Ybcfg

B Ua Y	9a Uj`	5j U]UV]`]m	@cWjhcb	D\cbY
5ggcWjUhr`DfcZggcf				

7ci fgY'8YHJ`g

7fYX]hDc]bhr`*`

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

H\]g`W`i fgY`XYj Y`cdg`gh XYbhr` WldUW]hmitc`k f]hY`UWUXYa]WYggUmg`UWw`fx]b[`hc`h`Y`W`bj Ybh]cbg`cZ`h`Y`<i a Ub]h]Yg" `#idfcj]XYg`h`Y`_bck`YX[Y`UbX`j`cWUvi`UfmVmk` \]W`gh`XYbhr`WUb`W]h]WU`mUbU`mgY`h`Y`k`cf`_`cZ`c`h`Y`fg`Ug`k`Y`Ug`h`Y`f`ck`b`H`Y`W`i fgY`Z`W`g`Y`g`i`ghU]bYX`U`h`Y`b`h`c`b`j`Uf]ci`g`a`cXYg`cZ`UWUXYa]W`k`f]h]b[`h`U`h`U`f`Y`i`gYX`]b`Y`gg`Umik`f]h]b[`UbX`g`l`ck`g`l`ck`h`Y`g`Y`a`UmVY`XYd`cmYX`h`c`d`f`Y`g`Y`bh`U`gh`f`cb[`Uf[i a Ybh`H`Y`W`i fgY`]bW`XYg`UbU`mg]g`cZU`fUb[Y`cZYI`Ya`d`U`fg`Ug`k`Y`Ug`Y`gg`Umg`Z`ca`UWUXYa]W`e`i`fb`U`g`f`Y`g`Y`U`f`W`X`V`m`gh`XY`b`hr`UbX`f`Y`U`h`Y`X`h`c`h`Y`f`X]gW]d`]bUfm]bhY`f`Y`g`hr`H`Y`g`gh`Xmk`]`V`Y`UWw`a`d`Ub]YX`V`mk`f]h]b[`YI`Y`f`W]g`g`z`k`f]h]b[`k`cf`_`g`l`cdg`UbX`XYHJ]YX`ZYXVUW`Z`ca`V`ch`d`Y`Y`fg`UbX`ghUZZ`

7ci fgY`@YUfb]b[`Ci hW`a`Yg

%`" `8`Ya`cbghfU`h`Z`W]`h`mk`]h`[`f`U`a`a`U`f`UbX`g`Y`bh`Y`b`W`W`c`b`gh`f`i`W]h]cbz`Uggc`W]U`h`X`k`]h`Z`b`X`U`a`Y`b`h`U`YI`d`Y`W`U]h]cbg`cZ`UWUXYa]Wk`f]h]b[`]b`h`Y`h`i`a`Ub]h]Yg`&`&`5`dd`m`Ugd`Y`W]g`cZ`h`Y`d`f]a`U`f`m`a`c`X`Y`g`cZ`UWUXYa]Wk`f]h]b[`]b`h`Y`h`i`a`Ub]h]Yg`z`]b`W`i`X]b[`YI`d`cg]h]cbz`XY`g`W]d]h]cbz`b`U`f`f`U`h]j`Y`UbX`Uf[i a YbhU]h]cb`" ` " ` " `G`h`f`i`W]h]f`Y`Z`Y`X]h]UbX`d`f`Y`g`Y`bh`U`d]Y`W`c`Z`k`f]h]b[`U`W`w`c`f`x]b[`hc`h`Y`W`bj`Y`bh]cbg`cZ`UWUXYa]Wk`f]h]b[`]b`h`Y`h`i`a`Ub]h]Yg`

HYUW]b[`G`h`f`U`h`[]Yg`

HYUW]b[`G`h`f`U`h`[]Yg`

Ci`f`U`dd`f`c`U`W`h`c`5`W`U`X`Y`a`]W`k`f]h]b[`Z`c`f`h`Y`<i`a`Ub]h]Yg`]g`Z`ci`b`X`Y`X`c`b`c`i`f`]b`h`Y`b`h]cb`h`c`]a`d`f`c`j`Y`k`f]h]b[`g`_]`g`h`f`c`i`[`h`i`b`X`Y`f`g`U`b`X]b[`Z`c`i`b`X`U`h]cb`U`W`c`b`W`d`h`g`c`Z`[`Y`b`f`Y`UbX`f`Y`h`c`f]W]h`h`Y`c`f`m`U`g`k`Y`Ug`W]h]W`Y`b[`U[`Y`a`Y`bh`k`]h`c`b`Y`g`c`k`b`k`f]h]b[`UbX`h`Y`k`f]h]b[`c`Z`c`h`Y`fg`" `K`Y`k`]`V`Y`[]b`V`m`YI`d`c`f]b[`h`Y`h`i`g`h`c`f]W]d`cg]h]cb`UbX`W`f`Y`b`h`W`c`b`h`i`h`c`Z`h`Y`U`W`U`X`Y`a`]W`Y`g`g`U`m]b`h`Y`<i`a`Ub]h]Yg`V`Y`Z`c`f`Y`a`c`j`]b[`hc`U`a`c`f`Y`g`m`g`h`Y`a`U`h]W`U`W`w`c`i`b`h`c`Z`k`h`U`h`W`c`b`g`h]h`h`Y`g`Y`Z`Y`W]h]j`Y`g`Y`bh`Y`b`W`g`z`g`h`f`c`b[`Uf[i a Ybhr`UbX`d`Y`f`g`i`Ug]j`Y`Y`j`]X`Y`b`W`" `H`Y`U`g`g`Y`g`g`a`Y`bh`h]g`_`g`k`]`U`c`k`g`h`i`X`Y`b`h`r`c`V`Y`[]b`h`c`V`i`]X`Y`Z`Y`W]h]j`Y`<i`a`Ub]h]Yg`Y`g`g`U`m`g`U`g`k`Y`Ug`Ub`c`d`d`c`f`h`b]h`m`i`r`c`[]j`Y`Z`Y`X`V`U`W`h`c`h`Y`f`g`U`V`c`i`h`h`Y`f`k`f]h]b[" `G`Y`Z`U`g`g`Y`g`g`a`Y`bh`k`]`U`g`c`Z`c`f`a`Ub`]a`d`c`f`h`U`b`W`c`a`d`c`b`Y`b`h`c`Z`h`Y`W`i`fg`Y`h`U`h`g`h`i`X`Y`b`h`r`c`W`c`b`h]b`i`Y`h`c`V`i`]X`h`f`c`i`[`h`c`i`h`h`Y`h`Y`f`a`"

H`Y`h`U`W`]b[`a`Y`h`c`X`g`i`g`Y`X`UbX`h`Y`U`g`g`Y`g`g`a`Y`bh`W`c`a`d`c`b`Y`b`h`g`h`U`j`Y`V`Y`Y`b`X`Y`j`Y`c`d`Y`X`h`c`f`Y`Z`Y`W`i`U`d`]`c`g`c`d`h`m`c`Z`Y`U`f`b]b[`UbX`h`U`W`]b[`k`h`W`k`

- Z`c`g`h`f`g`U`b`Y`b[`U[]b[`UbX`]b`W`i`g]j`Y`U`f`b]b[`YI`d`Y`f]Y`b`W`z`
- d`f`c`a`c`h`Y`g`d`Y`Y`f`Y`U`f`b]b[`h`f`c`i`[`h`d`Y`Y`f`Y`j`Y`k`UbX`U`g`g`Y`g`g`a`Y`bh`
- g`Y`Y`_`g`h`c`[]j`Y`Y`j`Y`f`m`g`h`i`X`Y`b`h`U`g`h`U`_`Y`]b`z`UbX`Ub`c`d`d`c`f`h`b]h`m`i`r`c`W`c`b`h]f]V`i`h`Y`h`c`z`h`Y`W`i`fg`Y`U`g`U`Z`c`f`i`a`Z`c`f`Y`U`f`b]b["

F`U`h]cb`U`Y`c`Z`5`g`g`Y`g`g`Y`X`H`U`g`_`g`

""`h`Y`d`f`U`W]h]W`YI`Y`f`W]g`Y`g`U`f`Y`U]a`Y`X`U`h`U`W`]Y`j`]b[""`Y`U`f`b]b[`ci`h`W`c`a`Y`g`%`UbX`" `UbX`X`Y`j`Y`c`d]b[`9`b[`]g`h`[`f`U`X`i`U`h`Y`U`h]f]V`i`h`Y`g`%`z`(``z`*`" `""`h`Y`G`h`c`f`h`f`k`f]h]b[`g`h`U`g`_]`g`U]a`Y`X`U`h`U`W`]Y`j`]b[""`Y`U`f`b]b[`ci`h`W`c`a`Y`g`%`h`' `UbX`X`Y`j`Y`c`d]b[`9`b[`]g`h`[`f`U`X`i`U`h`Y`U`h]f]V`i`h`Y`g`%`z`'`z`*`"

''''hY'9I hYbXYX'YggUm]g'U]a YX'UhUW\]Yj]b[''YUfb]b['ci hWta Yg'%d' žUbX'XYj Y'cd]b['9b[']g\ '[fUXi UhY
Uhf]Vi hYg'%ž' ž(ž) 'UbX'*

5ggYgga Ybh

5F HG&\$) \$! 5WUXYa]WK f]h]b['Zcf'hY'<i a Ub]h]Yg

A cfY]bZcfa Uh]cb'cb'UggYgga YbhHUG_g'Zcf'h]g'Wci fgY]g'Uj U]UV'Y'cb'hY'A ccX'Y'g]hY"

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5ggYgga YbhHUG_g'	K Y][\h	8i Y'8UH'	Gh XYbh@YUfb]b[Ci hWta Yg'5ggYggYX
G\cfhk f]h]b'd]YW'g') \$i	\$' #+\$&\$&\$'%%) - 'DA	%z&
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GhUfhXUH'. \$%#* #&\$&\$' %&.\$ \$'5A

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Gh XYbh]k]`dfcXi W' h'fYY'k f]h]b'd]YW'g'Ug'dUfhcZ'hY'YUfb]b['UW]j]h]Yg']b'hY'Z]fghZ]j Y'k YY_g'cZ'h'fa " : cfa Uh]j Y'ZYXVUW_k]`VY'dfcj]YX'Ug'U'dUfhcZ'hYgY'YUfb]b['UW]j]h]Yg" H\Y'h'fYY'k f]h]b'd]YW'g'a i gh h'Yb'gi Va]h]X'Zc'f'gi a a Uh]j Y'UggYgga YbhUh'hY'YbX'cZk YY_'Z]j Y" C fU'fYW'fYX'ZYXVUW_z'U'bi a Yf]WU' [fUXY'UbX'U'fi Vf]Wk]`VY'dfcj]YX'h'k c'k YY_g'UZ'h'f'gi Va]gg]cb"

Hi fb]h]b'gYh]b[. H\]g'Ugg][ba Ybh]g'gi Va]h]X'h'fci [\ 'Hi fb]h]b'UbX'ghi XYbh]Xc'bchgYY'Hi fb]h]b'g]a]Uf]mifYdcftrg"

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8YHJ]`g.

8YHJ]`g.'K cfX'Yb[h. %\$\$\$'H\]g'g'hY'Z]bU'UggYgga YbhHUG_g'': YXVUW_k]`VY'dfcj]YX']b'hY'Zc'fa 'cZ cfU'ZYXVUW'UbX'U'a Uf_]b['fi Vf]W

Hi fb]h]b'gYh]b[. H\]g'Ugg][ba Ybh]g'gi Va]h]X'h'fci [\ 'Hi fb]h]b'UbX'ghi XYbh]Xc'bchgYY'Hi fb]h]b'g]a]Uf]mifYdcftrg"

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C b`bY`[fUa a Uf`hYgh`C b`hcd]Vg`Wcj YfYX`]b`hY`Wci fgY" A Uf_YX`hYghfYh fbYX`hc`ghi XYbhtg`k]h`bi a Yf]WU`
[fUXY"

Hi fb]hb`gYhb[. H\]g`]g`bchiU`Hi fb]hb`Ugg][ba Ybh

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

H\YfY`]g`bc`gYh`hI hVcc_`Zcf`h`]g`Wci fgY

F YWca a YbXYX`F Ygci fWg

5bmichYfi gYZ`fYgci fWg`k`j`VY`i d`cUXYX`tc`h`Y`Wci fgY`A ccX`Y`g`]h`"

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

Gh XYbhZYXVUW`cb`h`]g`Wci fgY`k`j`VY`[U`h`Y`f`Y`X`i`g]b[`i`b] Yfg]hmUi hca U`h`X`d`f`c`W`X`i`f`Y`g`z`U`g`k`Y`"U`g`h`f`c`i`[`\`]b`Z`c`f`a`U`z`U`b`c`b`r`a`c`i`g`Z`Y`X`V`U`W`_`Z`c`f`a`g`":`Y`Y`X`V`U`W`_`k`j`V`Y`i`g`Y`X`tc`Ub`U`mg`Y`Ub`X`U`gg`Y`gg`h`Y`Wci fgYz

Gi Va]gg]cb`cZ5ggYgga YbhiHUg_g

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

Ʒmci`YbWci bHYf`U`dfcV`Ya`k` \Yb`UH`Ya` dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`h`fci`[`\`Hi`fb]h]b`z`d`Y`UgY`
HY`Yd`cb`Y`9I`HY`fb`U`Gi`ddc`fh`cb`-`,`)`"``"``%`cf`Ya`Uj`h`Ya`i`cb`YI`HY`fb`U`HY`hgi`ddc`fh`4`i`bgk`"YXi`"Ui`"Gi`ddc`fh`
`l`ci`fg`UfY`,`.\$\$Ua`-`-%\$.\$\$da`i`cb`k`YY`XUmg`UbX`-`.\$\$Ua`-`).\$\$da`i`cb`k`YY`YbXg`f`l`*)`XUmg`U`m`Y`Uf`l`"Ʒmci`
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`Xi`Y`hc`U`Z`Ji`h`k`]h`Hi`fb]h]b`mci`i`a`Um`Udd`m`Z`f`Ub`YI`HY`bg]cb`z`Vi`hmc`i`
a`i`gh`f`Y`h]b`mci`f`h]W`Y`hbi`a`VY`f`Z`ca`9I`HY`fb`U`Gi`ddc`fh`f`U`cb[`k`]h`Ub`m`c`h`Y`f`f`Y`Yj`Ub`h`X`c`W`a`Y`b`h`g`k`h`c`
]b`Wi`XY`Ug`Yj`]X`Y`b`W`hc`gi`ddc`fh`mci`f`YI`HY`bg]cb`Udd`]W`h]cb`"Ʒmci`Ya`Uj`9I`HY`fb`U`Gi`ddc`fh`mci`k`j`
Ui`h`ca`U`h]W`m`f`Y`W`j`Y`U`h]W`Y`hbi`a`VY`f`z`Vi`h]Z`mci`HY`Yd`cb`Y`mci`k`j`b`Y`Y`X`hc`gd`Y`W`Z`W`m`Ug`_`Z`f`cb`Y`
Hi`fb]h]b`U`gc`d`fc`j`]X`Y`gi`d`X`U`h`g`i`cb`h`Y`j`f`g`m`g`h`Ya`i`g`h`U`h`g`i`cb`Hk`]h`Y`f`"

;`Yb`Y`f`U`m`z`Ugg`Y`gga`Yb`hi`U`g`_`g`a`i`gh`V`Y`gi`Va`]h`Y`X`Y`Y`W`f`cb]W`m`j`]U`Y`]h`Y`f`Hi`fb]h]b`cf`U`A`cc`X`Y`
Ugg][`ba`Yb`h`i`h`]b`g`h`U`b`W`g`k` \Y`f`Y`h`l`g`]g`b`c`h`d`c`g`g]V`Y`z`]h`k`j`V`Y`g`h`U`h`X`i`cb`mci`f`W`ci`fg`Y`g`A`cc`X`Y`g`]h`k`]h`
U`h`Y`fb`U`h]`Y`gi`Va`]gg]cb`X`Y`h]g`"

:`cf`]b`Z`fa`U`h]cb`cb`l`ck`hc`gi`Va`]h`Ugg][`ba`Yb`h`g`i`cb]b`Y`j`]U`A`cc`X`Y`.\`h`d`g`#`g`h`X`Y`b`h`i`bgk`"YXi`"Ui`#`ck`!
gi`Va`]h`Ugg][`ba`Yb`h`a`cc`X`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`]b'h'Y'I BGK 'Wca a i b]m
- 'cWJh'gYfj]W'g'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 ""

[\hhd.##ji V'YW'i \]XYg" \]VfUfm'i bgk "YXi "Ui #' \]gY#JVci h' \]gY](#)

5 WUXYa]W=Zcfa Uh]cb

: cf`YggYbh]U`ghi XYbh]bZcfa Uh]cb`fY`Uh]b[`tc.