



ARTS3456

7`Ugg]WU`7 \]bYgY`@]hYfUhi fY

HYfa`H\fYY`##`&\$%-

7 ci fgY'8YHJ]`g

7 fYX]hDc]bhr`*`

Gi a a UfmicZ\hY'7 ci fgY

Gi VYWh5fYU. '5Z[VēWE fgV[Wē

H\]g`Wēi fgY`dfYgYbhr`U`bi a VY`cZa U`cf`hcd]Wg`]b`WUgg]WU`7\]bYgY`]]hYfUhi fY`Zca`dFY!E`]b`dYf]cX`fW`%&&!&&%67E`hc`hY`E`]b[`'8mbUghmf%*((!%- %&`K`Y`k`]]`b`_`hYgY`hcd]Wg`hc`j`Uf]ci`g`[`YbFYg`]bW`X]b[`d\]`cgcd\]WU`k`f]h]b[`gž`dcYhfmrž`YggUmg`UbX`Z]W]cbž`Ug`k`Y`Ug`]]hYfUfmW]]h]W]ga`" H\Y`hcd]Wg`]bW`i`XY`]bX]j`]Xi`U`ZYYXca`]b`dFY!E`]b`d\]`cgcd\Yfg`f]bW`i`X]b[`'>g`kgt`?`W`YI`[`UbX`L`ZgS``YI`[fž`YfcYg`UbX`j`]]`U]bg`]b`V]c[`fUd\]Yg`fE`Z[\`N`WUadVe`aXfZW: [efadS``Œ`c`j`Y`UbX`bUhi`fY`]b`dcYhfmf]bW`i`X]b[`'E`Z[\`Y`N`ZW4aa`]`aX`A`VWēZ`HUb[`'E`Z[`UbX`Gcb[`'5`[ž`Z]bY`Ufhr`]b`]]hYfUhi`ghmYž`YggUmg`fZc`W`g]b[`'cb`hY`]b`hYffY`U]h]cbg\]d`VYrk`YYb`dcYhfUfmUbX`dU]b]h]b[`ž`Ug`k`Y`Ug`fca`UbW`UbX`Wēi`fhr`d]b`j`YfbUW`Uf`Z]W]cb`fZca`'HUb[`'F`ca`UbW`g`hc`':`a`Y`ag`?`W`Y`N`6dMS_`aXD`W`?`S`e[a`e@`" H\Y`Wēi`fgY`]g`]b`hYbXYX`hc`Yb\UbW`mci`f`UV]]]mihc`fYUX`UbX`UddfYW]Uhi`WUgg]WU`7\]bYgY`]]hYfUhi`fY`]b`]hr`X]ZYfYbhZcfa`gž`Ug`k`Y`Ug`]hr`i`bXYfm]b[`'d\]`cgcd\]WU`UbX`UYgh`Yh]Wdf]bW]d`Yg`"

7 ci fgY`@YUfb]b[`'Ci`hWēa`Yg

%`F`YUX`UbX`]b`hYfdFYhfYdfYgYbU]h]`Y`hY`hg`]b`WUgg]WU`7\]bYgY`]]hYfUhi`fY`&`"7`f]h]WU`m]UbU`mgY`cf][`]bU`hY`hg`UbX`gYWēbXUfm]gci`fW`g`'`"8`Y`Z]bY`UbX`Y]`U`i`U`h`'a`U`cf`]]hYfUfm]hYcf]Yg`UbX`[`YbFYg`]b`WUgg]WU`7\]bYgY`]]hYfUhi`fY`("9I`d`U]b`hY`d\]`cgcd\]WU`UbX`UYgh`Yh]Wdf]bW]d`Yg`i`bXYfm]b[`'WUgg]WU`7\]bYgY`]]hYfUhi`fY`)"8`Ya`cbghfUhi`g_]`g`]b`gW`c`UfmYbei`]fm]b`7\]bYgY`!VUgYX`X]gW]d`]bUfm]gh`X]Yg`UbX`W`ffYbh`UWUXYa`]WX]gWēi`fgY`"

HYUWX]b[`'GhfUhi`[`]Yg`

K`]h`hY`Yj`Yf!`]bWfYUg]b[`]bZi`YbW`cZ7\]bU`]b`hY`k`cfX`UfYbUž`]h]g`]a`dcffUbhic`i`bXYfgfUbX`7\]bU`g`dUgh`]b`cfXYf`hc`VYhYf`i`bXYfgfUbX`]hr`dfYgYbH`H\]g`Wēi`fgY`\Y`dg`hc`Vf]X[`Y`hY`[`Ud`VYrk`YYb`hY`UbW]Yb`h`7\]bYgY`W]]`]gU]h]cb`UbX`Wēb`hYa`dcfUfm7\]bYgY`W`h`i`fY`h`fci`[`\`U`ghi`XmcZj`Uf]YhmcZ`WUgg]WU`]]hYfUfm`hY`hg`" H\Y`WUgg`a`YY`hr`Zcf`(`\`ci`fg`YUWX`k`YY`_`k`]h`U`Wēa`V]bU]h]cb`cZ`YW`i`fY`UbX`h`hc`f]U`ž`k`\YfY`hY`h`hc`f]U`\`Ug`U`gh`fcb[`'Ya`d\Ug]g`cb`WUgg`X]gW`gg]cb`cZ`Vch`df]a`Ufm]UbX`gYWēbXUfma`Uhf]U`g`" H\Y`hYUWX]b[`'ghfUhi`[`mik`]]`VY`U`][`bYX`k`]h`hY`YUfb]b[`'ci`hWēa`Yg`cZ`hY`Wēi`fgY`"5`b`]b`hYfX]gW]d`]bUfm]Uddf`cUWX`k`]]`VY`UXcd`hY`Xž`k`\YfYVmi`]]hYfUfm]hY`hg`k`]]`VY`YI`Ua`]bYX`Zca`d\]`cgcd\]WU`ž`UYgh`Yh]W]ž\]g`hr`f]WU`Ug`k`Y`Ug`]]b[`i`]gh]WdYfgdYW]]`Yg`":`%o`

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F YgYUfW`Dfc YW) \$i	%) #/%#&\$%- fZcf]b!WUgg dFYgYbH]cbt/ &&#/%#&\$%- fZcf'[fci d'fYgYUfW`dUdYfL	%ž(ž)
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GHUfhXUH. Bch5dd`WVY

8YHU]`g. Gh XYbhg`Wta d`YH`U`hYghf%) `aci fgŁž]bW X]b[`g\cfhUbX`YggUmhmdY`ei Ygh]cbg" Gh XYbhg
fYW]j Y`U`a Uf_žUbX`Wb`Wcbgi`h`hY`YW`fYf`Zcf`Zi`fhYf`ZYXVUW`H\]g`]g`hY`Z]bU`UggYgga YbhZcf
UH`bXUbW`di`fdcgYg"

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

5XX]h]cbU`]bZfa Uh]cb`k`j`VY`dfcj`]YX`cb`hY`Wci`fgY`A`ccX`Y"

Hi fb]h]b`gYH]b[. H\]g`]g`bchU`Hi fb]h]b`Ugg][ba Ybh

5ggYgga Ybh&. F YgYUfW`Dfc YW

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8YHU]`g. H\]g`[fci d`dfc`YW`hWcbg]gh]cZk`c`dUfHg. U`[fci d`k`f]hYb`YggUmif&) \$\$!`" \$\$\$`k`cfXg`dYf`YggUmŁ
UbX`U`[fci d`dfYgYbH]cb`fl!) `a`]bi`hYg`dYf`dYfgcbŁGh`XYbhg`fYW]j`Y`U`[fci d`a`Uf`Zcf`hY`fYgYUfW`YggUm
UbX`Ub`]bX]j`]Xi`U`a`Uf`Zcf`hY`dfYgYbH]cb`":`YYXVUW`_j`]U`]bX]j`]Xi`U`Wta`a`Ybhgžfi`Vf]Vž`UbX`]b!`WUgg
X]gW`gg]cb"

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H\]g`UggYgga YbhWcbg]gh]cZUb`]b!WUgg`dFYgYbH]cb`UbX`U`[fci d`fYgYUfW`dUdYf`h`VY`gi`Va`]hYX`j`]U
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fYdcfhg"

5ggYgga Ybh' . 7 f]hWU`F Yj]Yk`

GhUfhXUHY. 'Bch5dd`jWV`Y

8YHU]`g. 'Gh XYbfg`k f]h`U`W]h]W`fYj]Yk `f&\$\$\$`k cfXgE`cb`Wci fgY`fYUX]b[`a UHYf]U": YYXVUW`j]U`]bX]j]Xi U`
Wca a Ybfg`z`fi Vf]W`UbX`]b!WUgg`X]gW`gg]cb"

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

H\]g`UggYgga YbhWcbg]gh`cZcbY`W]h]W`fYj]Yk `hc`VY`gi Va]hYX`j]U`Hi fb]hb"

Hi fb]hb`gYh]b[. 'H\]g`Ugg][ba Ybh]g`gi Va]hYX`h`fci [\ `Hi fb]hb`UbX`gh XYbfg`Wb`gYY`Hi fb]hb`g]a]`Uf]m
fYdcfg"

5 hYbXUbW`F Yei]fYa Ybhg

Gh XYbhg`UFY`ghfcb[`mYbWci fU[YX`hc`UhhYbX`U`WUggYg`UbX`fYj]Yk ``YWhi fY`fYWcfX]b[g"

7 ci fgY`GW`YXi `Y

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H]a`YhUV`Y`

8UhY	HmdY	7cbhYbh
K YY_%`%*`GYdhYa VYf! &\$`GYdhYa VYf	@YWhi fY	; YbYfU`]bffcXi W]cb.`Cj`Yfj`Yk`cZhY`7ci fgY! ? bck`YX[`Y`ZUa`Yk`cf`_UbX`hYUWk]b[`a`YhcXc`c[m/ =bffcXi W]cb`hc`DfY!E]b`@]hYfUhi fY`UbX`]hg`\]ghcf]WU` UbX`W`hi fU`VUW_[fci bX/ HYI hg.`HAY`6cc`_cZGcb[g`fl` lZ`E`i`M`Ub`UbX`hY` Gcb[g`cZ7`i`fl` l
	Hi`hc`f]U`	8]gW`gg]cbg`cZhY`Wci fgY`fYUX]b[`UbX`hY`YWhi fY` WcbhYbhicZhY`k`YY`_`
K YY_&.`&`GYdhYa VYf! &+`GYdhYa VYf	@YWhi fY	DfY!E]b`D\]`cgcd`m`hY`DfY!E]b`d\]`cgcd`Yfg`UbX` hY]f`]bZi`YbW`cb`7\]bYgY`]Xyc`c[mUbX`W`hi fY/ 'HYI hg.`5bUYW]g`cZ7`cbZ`W]i`g`fl` lZA`YbW]i`g` fl` lZ`@Ucn]`fl` lZ`N\i`Ub[n]fl` l
	Hi`hc`f]U`	8]gW`gg]cbg`cZhY`Wci fgY`fYUX]b[`UbX`hY`YWhi fY` WcbhYbhicZhY`k`YY`_`
K YY_`'`.`\$`GYdhYa VYf! (`C`Wc`VYf	@YWhi fY	=bffcXi W]cb`hc`<`Ub`8`mbUgmi@]hYfUhi fY`UbX`]hg` \]ghcf]WU`_UbX`W`hi fU`VUW_[fci bX/ <`Ub`:`i`fl` l`UbX`]hg`fYdfYgYbhU]h]`Y`k`f]hYfg`UbX`

		Wc b h b h c Z h Y ' k Y Y _ "
K Y Y _ * . ' & % C W c V Y f ! ' &) C W c V Y f	F Y U X] b [F Y U X] b [' K Y Y _ ! ' f Y U X ' h Y ' d f c j] X Y X ' a U h f] U ' g ' U b X d f Y d U f Y ' Z c f ' h Y ' f Y g Y U f W X ' f Y j] Y k ' U b X ' [f c i d ' d f c ' Y W Y
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7ci fgY'9j U'i Uh]cb'UbX'8Yj Y`cda Ybh

H\]g'Wci fgY'k]`VY'Zcfa U`mYj U'i UHX'hkfc [\ 'A mØl dYf]YbW"

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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_XUmj`UbX`-`. \$\$Ua`-`). \$\$da`cb`k`YY_YbXg`G`
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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.

7cdm]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[YgžUfhUbX`XYg][b`dfc`YWgžUg`k Y`Ug
dfYgYbhU]cbg`k \YfY`gca YcbY`dfYgYbh]g`UbchYf`g`]XYUg`cf`k cfXg`k]h`ci hWYX]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`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 hWYX]hU`bX`hc
d]YW]b[`hc[YhYf`ei chYg`UbX`dUfUd`fUgYg`]bhc`U`bYk `k \c`Yž`k]h`ci hUddfcdf]UHY`fYZYfYbW]b["

7c`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_]7c`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'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'jb'h'Y'I BGK 'Wc'a a i b]m
- `cWJh'gYfj]W'g'UbX'jbZcfa 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]WbZcfa Uh]cb`

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

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

