



ARTS4266

Di nn`Ygž`D`Ubb]b[ž`UbX`DfYgYbHUh]cb`žcf`<`cbci`fg`]b`h\Y
GcWU`GWYbWg

HYfa`Cby`#`&\$&\$

7 ci fgY`Cj Yfj JYk

`GHUZZ7cbhUWhi8YHJ`g`

`7cbj Ybcfg`

B Ua Y	9a Uj`	5j Uj`UVj]m	@cWWhcb	D\cbY
GjcV\Ub`C fGi ``j Ub	gjcV\Ub"cgi ``j Ub4 i bgk "YXi "Ui	9a Uj`Zcf Uddc]bha Ybhg	%&*zA cfj Yb 6fck b	- ' ,) '\$* , -

GW\cc``7cbhUWhi`bZcfa Uhjcb

GW\cc``cZGcWU`GWYbWg

Fcca`%) -

A cfj Yb`6fck b`7 &\$

Ya Uj`.gcgg4 i bgk "YXi "Ui

d\cbY. \$&`- ' ,)`% \$+

7 ci fgY'8YHJ]`g

7 fYX]hDc]bhtg '*`

Gi a a UfmicZ\hY'7 ci fgY

H\]g'jg'U'Wta di `gcfmVci fgY'Zc'GcW]U'GWYbWg`cbci fg'ghi XYbhtg]b'hY'GVXcc`cZGcW]U'GWYbWg" #k]`b]bfcXi W'mci `hc'hY'dfUW]W'cZ\hYg]g'k f]h]b[`UbX'gi ddcfimeci `]b'hY'YUfmg]U[Yg'cZXYj Y'cd]b[mci f`cbci fg'Uf[i a YbH'H\]g'Wci fgY'j]bW' XYg'hd]W]gi W'Ug.'i g]b[``]VfUfmfYgci fWg'Zc'f`cbci fg'ghi XYbhtg]bW' X]b[`fYgYUfW'Wcbgi `h]cb'UbX'UW]gg'hc'XUHUUgYg/h'Y'fc'Y'cZa Y'h'cXg'j]b'fYgYUfW'UbX'hY'i gY'cZ\hYcfm]b'ZUa]b[`UbX'WcbXi W]b[`U'fYgYUfW'dfc'YW]b'hY'gcW]U'gWYbWg/mci f'Y'h]W'fYgdc]b]h]Yg'Ug'U'fYgYUfW'Yf/UbX'd'Ubb]b[`UbX'a UbU[]b[`U'fYgYUfW'dfc'YW]k cf_]b[`YZYW]j Y'mk]h mci f'gi dYfj]gcf/h]a Y'UbX'XUHU'a UbU[Ya Ybhtg_]`g" H\Y'Wci fgY'j]bfcXi W'g'mci `hc'hY']XYU'cZ'ZUa]b[mci f'fYgYUfW'Ug'Ub'j]b]fj Yb]cb'j]b'U'X]g]d'j]bUfmXYVUH'f'c'f'gYf]Yg'cZXYVUH'gE" 5'dUfh]W'Uf'Zc'W'g'cZ\hY'Wci fgY'j]b]bfcXi W]b[`ghi XYbhtg'hc'hY'hYg]g'Zc'fa "H\]g'j]bW' XYg'YUfb]b[`UVci h'hY'Wta dcbYbhdUf]g'cZU a]bcf'hYg]g]z'UbX'h]b_]b[`UVci h`ck `mci `a][`h'Wcb]gh] W'mci f'ck b'hYg]g]z'Zc'fa U[]a i a `]a dUW]"

7 ci fgY '@YUfb]b[`Ci hWta Yg

%` #XYbh]Zm'hY'ZYU'fYg'cZUb'ci h]h]UbX]b[`hYg]g'cf'X]ggYf]U]cb`"
&" J YfVU`mdfYgYbha UHf]U'`]b'Ub'Yb[U[]b[`UbX'j]bZc'fa U]h] Y'k Un'
' " K cf_`Wc`UVcf]U]j Y'mk]h'Wc`YU[i Yg'hc'g'UfY'g_]`g'UbX'_bck `YX[Y'fY'Yj Ub]hc'dfcXi W]b[`U'a]bcf hYg]g

HYUW]b[`GhfUH[]Yg'

H\Y'j]b]b]g]j Y'k cf_g\cd'U`ck g'mci `hc'[Yhk cf_]b[`cb'mci f'fYgYUfW'dfc'YW]g'ei]W'm' #]g'XYg][bYX'hc Vch'gi ddcfimeci z'UbX'hc'YZ]W]Yb]m]b]bfcXi W'mci `hc'hY'_Ymid]YW]g'cZ_bck `YX[Y'mci `k]`bYXX'hc Wta d'YH' mci f`cbci fg'mYUf" H\]g'j]bW' XYg'j]bZc'fa U]h]cb'cb'hY'Y'h]W]Udd']W]h]cb'dfc'W]ggz'XUHU'g]hc'fU[Yz k cf_]b[`k]h'U'gi dYfj]gcf'UbX``]VfUfmfYgci fWg" H\Y'UggYgga Yb]hZc'W'g'k]`VY'cb'j]XYbh]Zm]b[`YI W'YbW]b'hYg]g'k f]h]b[`VmWcbgi `h]b[`Vch'hY'`]Hf]U'fYz'UbX'dUgh'cbci fg'hYgYg" Mci `k]`U'gc'g'UfY'hY]f YI dYf]h]gYz'k]h'chYf]g'j]b'hY'WUggz'j]U'mci f'[fci d'dfYgYb]h]cb]g" 8]ZYfYb]hd]fYgYb]h]cb]g'k]`VY'Zc'W'gYX cb'X]ZYfYbhY'Ya Ybhtg'cZU'a]bcf'hYg]g"

5ggYgga Ybh

D`YUgY'gYY`A ccXY`Zc`Z` ``]bZcfa UHcb`UVci hi`hY`UggYgga Ybhg`"

5ggYgga YbhHUg_g`

5ggYgga YbhHUg_	K Y][\h	8i Y`8UH`	Gh XYbh`@YUfb]b[Ci hWta Yg`5ggYggYX
9ggUm	* \$i	\$* #\$(#&\$&\$`\$) . \$\$`DA	%
; fci d`dfYgYbhUHcb`	' \$i	% (#\$(#&\$&\$`\$& . \$\$`DA	&Z
7`Ugg; ; i]XY`!`VUgYX`cb dfYgYbhUHcb`	%\$i	% (#\$(#&\$&\$`\$& . \$\$`DA	'

5ggYgga Ybh8YHJ]`g

5ggYgga Ybh%`9ggUm

GhUfhXUH`.

@Yb[h. `&Z) \$\$

8YHJ]`g. Gh XYbhg`k]`k f]hY`U`&Z) \$\$`k cFX`YggUmZcW`gYX`cb]XYbh]Zhb[`UbX`YI d`cf]b[`hY`ZUhi fYg`cZUb
ci hgUbx]b[`fYgYUfW`X]ggYfUHcb`"K f]hYb`ZYXVUW`_UbX`U`bi a Yf]W]`[fUXY`k]`VY`fYhi fbYX`k]h]b
hk c`k YY_g`cZXY`] Yfm`

Hi fb]hb`gYH]b[. H\]g`Ugg][ba Ybh]g`gi Va]hYX`h`fci [\`Hi fb]hb`UbX`ghi XYbhg`Xc`bchgYY`Hi fb]hb
g]a]Uf]mfYdcftrg`"

5ggYgga Ybh&. ; fci d`dfYgYbhUHcb

GhUfhXUH`.

@Yb[h. ` \$`a]bi hY`cfU`dfYgYbhUHcb

8YHJ]`g. K cf_]b[]b[fci dgZ`gh XYbhg`k]`dfYgYbh`hY`fYghcZ`hY`WUgg`k]h`hY]f`UbU`mg]g`cZk \Uh
Wc`bg]hi hYg`Ub`ci hgUbx]b[`h`Yg]g`"K f]hYb`ZYXVUW`_UbX`U`bi a Yf]W]`[fUXY`k]`VY`fYhi fbYX`k]h]b
hk c`k YY_g`cZXY`] Yfm`; fUX]b[]g`Wc`Y`W]j`Y`"

5ggYgga Ybh` . 7`Ugg; ; i]XY`!`VUgYX`cb`dfYgYbhUHcb

GhUfhXUH`.

@Yb[h. `%Z\$\$\$`k cFXg

8YHJ]`g. 9UW` [fci d`fVUgYX`cb`hY`dfYgYbhUHcb[fci dgE`k]`dfcXi W`U`%Z\$\$\$`k cFX` [i]XY`Zc`f`hY]f
WUgga UhYg`f`h`cgY`a Ya VYfg`cZ`hY`WUgg`k \c`X]X`bchdfYgYbhk]h`hY` [fci dE`H`Y` [i]XY`k]`U]X`hY`fYgh
cZ`hY`WUgg`]b`hY]f`h`Yg]g`dfYdUfUHcb`k cf`_"K f]hYb`ZYXVUW`_UbX`U`bi a Yf]W]`[fUXY`k]`VY`fYhi fbYX`
k]h]b`hk c`k YY_g`cZXY`] Yfm`; fUX]b[]g`Wc`Y`W]j`Y`H\]g`]g`hY`Z]bU`UggYgga YbhZc`f`h`g`Wc`i fgY`"

Hi fb]hb'gYhb[. 'H\]g'Ugg][ba Ybh]g'gi Va]hX'h'fci [\ 'Hi fb]hb'UbX'ghi XYbhg'Xc' bchgYY'Hi fb]hb
g]a]Uf]mfYdcftrg"

5 HbXUbW F Yei]fYa Ybhg

D`YUgY`bch`hUh`YWh`fY`fYw`fX]b[g`UfY`bchUj`U]UV`Y`Zcf`h]g`Wci`fgY`"Gh`XYbhg`UfY`ghcb[`mYbWci`fU[YX`hc`UHbX`U`WUggYg`UbX`Wb`hUWh`hY`7ci`fgY`5i`h`cf]mhc`a`U`Y`U`h`fbUj`Y`UffUb[Ya`Ybhg`Zcf`WUggYg`a`]ggYX"

7 ci fgY`GW`YXi`Y`

[J \]yk`WUgg`ha`YhUV`Y`](#)

H]a`YhUV`Y`

8UH	HmdY	7cbhYbh	
K YY_%`%+`:`YVfi`Ufm!`&%`GYa`]bUf` :`YVfi`Ufm		:` K YY_%`! Hi`Yg`:`YV` %`z`&da`-` *da`	&da`-`(`da` K`Y`W`a`Y` K`\\Uh]g`mci`f`dfc`Y`W`B` K`cf`_`b[`k`]h`d`U`gh`h`Y`g`Y`g` (`da`-`*`da`

		<p>"K \Yb`XcYg`]bgh`h`h`cbU`Yh`Jg` Uddfcj`U`bYYX`hc`VY`cVhU]bYX3` (`H\Y`I`BGK`F`YgYUfW`7`cXY`cZ7`cbXi`W` (`da`-`*`da`</p>
		<p>H\Yg]g`9`Ya`Ybh` .`K` \Uh]g`a`m` `]hYfUhi`fYfgL3` %`K` \m]h]g`bYW`ggUfmhc`W`cbXi`W`hU` `]hYfUhi`fY`fYj`JYk` &":`]bX]b[`'hY`"]hYfUhi`fYfgL`mci`bYYX` "Di`fdcgYZ`"fYUX]b[`cZ`hY`"]hYfUhi`fY` (`7`fYUh]b[`Ub`UbbchU`h`V`]c[`fUd`m`)`-`bWi`g]cb`UbX`Yi`Wi`g]cb`W`]hYfU`Z`f` mci`f`]hYfUhi`fY`fYj`JYk`</p>
<p>K`YY_)`.%*`A`UfW`!`&\$` A`UfW`</p>	<p>GYa`]bUf`</p>	<p>&da`-`(`da` K`YY_)`-` Hi`Yg`</p>

		<p>%" ÆYbh]Zh]b['dUhtYfbg]b'Yj]XYbW</p> <p>&" <ck 'hc'gfi W' fY'mci f'Z]bX]b[g</p> <p>' "' <ck 'hc'W'a a i b]WU'Y'mci f'Z]bX]b[g'hc h\Y'fYUXYf</p> <p>("' <ck 'hc'XYW]XY'k \Uhtc']bW' XY'UbX k \Uhtc'YI W' XY</p>
<p>K YY_-' :% '5df]'! '%+ 5df]'</p>	<p>GYa]bUf</p>	<p>: &da '-(da</p> <p>K YY_-' - H\Yg]g '9'Ya Ybh*' :Gc'k \Uh]B'ftrci f Hi Yg X]gW' gg]cb' UbX'W'cbW' g]cbgŁ' 5df]'%{</p> <p>%" 8Yj Y'cd]b['h\Ycfm'</p> <p>&" K \Yb']g']hbYW'ggUfmhc' dfYgYbh bYk 'h\Ycfm3</p> <p>' "' <ck 'hc'fY'UH' 'mci f'Z]bX]b[g'VUW'hc h\Y'YI]gh]b['']h'fU' fY"</p> <p>("' <ck 'hc'W'cbW' XY' mci f'fYgYUfW' d'fc'YWh</p> <p>: (da '-* da</p> <p>7 'Ugg' dfYgYbh]h]cbg.'</p> <p>(da '-("' \$da '9'Ya Ybh%' K \Uh]g'a m fYgYUfW' ei Ygh]cb3</p> <p>("' \$-') da '9'Ya Ybh' . K \Uh]g'a m]h'fU' fYfgŁ3</p> <p>) '-)' "' \$da '9'Ya Ybh' (. K \Uh]g'a m a Yh'cXfgŁ3</p> <p>) "' \$-' * da '9'Ya Ybh' . K \Uh]g'a m Yj]XYbW'UbX' \ck' Xc' =a U_Y'gYbgY'cZ]h3</p> <p>* da . :bZ'fa U'YbX'cZ]h'fa 'Xf]b_g'</p>

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

5`fYUX]b[g`k]`VY`]b`@[Ubr`"9bhfj]U`A ccX`Y`"

F YWca a YbXYX`F Ygci fWg

5`fYUX]b[g`k]`VY`]b`@[Ubr`"9bhfj]U`A ccX`Y`"

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

Mci f`ZYXVUW_k]`VY`i gYX`hc`i dXUhrX`YWh fy`hcd]Wg`UbX`UggYgga Ybhg`"

Gi Va]gg]cb`cZ5ggYgga YbhHUg_g

Gi Va]gg]cb`cZ5ggYgga YbhHUg_g

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

≠nci`YbWci bhYf`U`dfcV`Ya`k`Yb`UthYa dh]b[`hc`gi Va]hnci f`Ugg][ba YbhHfci [\`Hi fb]h]bzd`YUgY

5 WUXYa]W<c bYghmiUbX`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`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`U`b[]b[`U`ZYk`k cfXg`UbX`d`fUgYg`k`Y`a cghmiFYhU]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["

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']bZ'fa U'h'cb'UVci hl BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZ'Y'gY'UfY'Ug'k]''VY'ZJa]]Uf'hc'mci ž'c'h'Yfg'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 cgh'cZ'mci f'gh X]Yg'Uhl BGK ""

[\h'hd.##gi V'Y'W'i \]X'Yg" \]VfUfm'i bgk "YXi "Ui #' \]gY#UVci h' \]gY](#)

5 WUXYa]W]bZcfa Uh]cb`

: cf`YggYbh]U`ghi XYbh]bZcfa Uh]cb`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`chYf`YggYbh]U`UWUXYa]W]bZcfa Uh]cbz`gYY

[\hhdg.#k k k "Ufmg"i bkg "YXi "Ui #W ffYbhghi XYbh\]bZcfa Uh\]cb`dfc\]Vc`g!\[i \]XY`\]bYg#](#)

⇒ U[Y`7 fYX]h

GmbYf[]Yg`]b`Gci bX`&\$%*`

7F ⇒ CG

7F ⇒ CG`Dfcj]XYf`7cXY.`\$\$\$- , ;