

ARTS3330

@Ub[i U[Yg'7 Udghc bY. 'HfUbg`Uh]cb`UbX' ðhY fdfYh]b[

GYa YghYf`C bY`#`&\$%

7ci fgY`Cj Yfj]Yk

`GHUZZ7cbhUW`i8YHJ`g`

`7cbj Ybcfg`

B Ua Y	9a U]`	5j U]`UV]`]m	@cWU]hcb	D\cbY
@i Xa]U`GHYfb	``ghYfb4 i bgk "YXi "Ui	A cbXUm&! (`da	A 6 `&) +	- ' ,) `&' , &

GWXcc``7cbhUW`i`bZcfa Uh]cb

GWXcc``cZ<i a Ub]hYg`UbX`@Jb[i U[Yg

@cWU]hcb. `GWXcc``C Z]W`ZA cfj Yb`6fck b`6i]X]b[ž@Yj Y``&ž&),

C dYb]b[`<ci fg. A cbXUm! `: f]XUmž- Ua `!`(.() da

D\cbY. `Ž*%&`- ' ,) `%* , %

: U! . `Ž*%&`- ' ,) `; , +\$)

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

5hYbXUbW`F Yei]fYa Ybhg

UbX'gUZ'hm/YI Ua]bUh]cb'dfcW'Xi fYg/gdYW]U`Wc]bg]XYfU]cb`]b`h`Y`Yj`YbhcZ]`bYgg'cf'a]gUXj`Ybhi`fY/
ghi`XYbhYei`]m]UbX`X]gUV]`]m]UbX`ch`Yf`YggYbh]U`UW]XYa`]W]bZ`fa`Uh]cbž
gYY`[\hdg.#k.k"Ufng"i bkg "YXi "Ui #W ffYbhighi XYbng#UW\]XYa`\]W\]bZ`fa`Uh\]cb#dfc\]cW`g!\[i\]XY`\]bYg#](#)

7ci fgY'8YHJ]`g

7fYX]hDc]bqg`*`

Gi a a UfmcZh\Y'7ci fgY

Gi V'YWh5fYU.'5Z[` WēWE fgV[Mēf 8dW UZ E fgV[Mēf 9Wd_S` E fgV[Mēf <SbS` WēWE fgV[Mēf =adMS` E fgV[Mēf

5ggYgga Ybh' .: cfb][\hmiUgg][ba Ybhg

GHUfhXUHY. 'Bch5dd'WUVY

8YHU]g. : cfb][\hmiUgg][ba Ybhg'f&) \$'hc') \$\$'k cfXgk]bj c'j]b['hY'UbU`mg]g'UbX'Wta dUf]gcb'cZ
a cbc`b[i U'UbX'V']b[i U'a i `hja YX]U'k]h'fYZYW]j Y'Wta a Ybhg"9UWX'Ugg][ba Ybh]g'k cfh' %\$i "A Uf_]b[
k]h'U'fi Vf]Wk]h']bX]j]Xi U'k f]hYb'ZYXVUW_'UbX'[fci d!VUgYX'cfU'ZYXVUW_']b'hi'hc'f]U'g"

Hi fb]h]b'gYh]b[. H\]g'Ugg][ba Ybh]g'gi Va]hYX'h'fci [\Hi fb]h]b'UbX'gh XYbhg'Xc'bc'hgYY'Hi fb]h]b
g]a]Uf]m'fYdc'fng"

Gi Va]gg]cb'cZ5ggYgga YbhHUg_g

Gh XYbng'UFY'YI dYWVX'hc'di h'AY'f'bUa Yg'UbX'ghi XYbhbi a VYfg'cb'Yj YfmdU[Y'cZ'AY]f'Ugg][ba Ybng"

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

z'nci 'YbWci bHY'U'dfcV'Ya 'k \Yb'UHYa dh]b['hc'gi Va]h'nci f'Ugg][ba Ybh'fci [\ 'Hi fb]h]bzd'YUgY
HY'Yd\cbY'9I HYfbU'Gi ddcf'hc'b'-' ,) ' ' ' %cf'Ya U]'h'Ya 'cb'[YI HYfbU'HY'f'gi ddcf'h4 i bgk "YXi "Ui "](#)Gi ddcf'h
\ci fg'UFY' , \$\$Ua '-%\$. \$da 'cb'k YY_XUmg'UbX'-' . \$Ua '-) . \$da 'cb'k YY_YbXg'f'l *) 'XUmg'U'mYUf'z'nci
UFY'i bUV'Y'hc'gi Va]h'nci f'Ugg][ba Ybh'Xi Y'hc'U'ZU'i 'hk]h'Hi fb]h]b'nci 'a UmiUdd'm'Zcf'Ub'YI HYbg]cbz'Vi h'nci
a i gh'fY'U]b'nci f'h]W'Yhbi a VYf'Z'ca '9I HYfbU'Gi ddcf'h'f'U'cb['k]h'Ubmc'h'Y'f'f'Y'Yj Ubh'Xc'W a Yb'ng'k'hc
]b'Wi XY'Ug'Yj]XYb'W'hc'gi ddcf'h'nci f'YI HYbg]cb'Udd'j'W'h]cb" z'nci 'Ya U]'9I HYfbU'Gi ddcf'h'nci 'k]'
Ui 'ca Uh]W'U'm'f'Y'W'j'Y'U'h]W'Yhbi a VYf'z'Vi h]Z'nci 'HY'Yd\cbY'nci 'k]'b'YX'hc'gd'Y'W'Z'W'U'm'Ug'_Zcf'cbY"
Hi fb]h]b'U'gc'd'fcj]XY'gi dXU'HY'g'cb'h'Y]f'g'm'gh'Ya 'gh'U'h'g'cb'Hk]h'f'"

; YbYfU'mz'UggYgga YbhHUg_g'a i gh'VY'gi Va]h'YX'Y'Y'W'f'cb]W'U'mj]U'Y]h'Y'f'Hi fb]h]b'cf'U'A ccX'Y
Ugg][ba Yb'h'-'b]bg'h'Ub'W'g'k \Y'f'Y'h']g']g' b'ch'd'c'g'g]V'Y'z'hk]'VY'g'f'U'Y'X'cb'nci f'Wci fgY'g'A ccX'Y'g]h'k]h'
U'h'f'b'U'h]j'Y'gi Va]gg]cb'XY'U]g"

@UH'5ggYgga YbhDYbU'h]Yg

5b'UggYggYX'f'Ug_']g'XY'Ya YX'UH']Z]h]g'gi Va]h'YX'U'Z'Y'f'h'Y'gd'Y'W'Z'YX'h'a Y'UbX'X'UH'U'g'g'Y'hci h]b'h'Y
Wci fgY '@Y'U'fb]b['A UbU[Ya Ybh'G'm'gh'Ya 'f'@A G'L"

H'Y'UH'd'Y'b'U'm]g'h'Y'c'gg'cZ) i 'cZ'h'Y'hc'U'd'c'g'g]V'Y'a Uf_g'Zcf'h'Y'f'Ug'_Zcf'Y'U'W'X'U'm'c'f'd'U'f'h'Y'f'Y'c'Z'h'Y
k'cf_']g'UH' '@UH'b'Y'gg'k]']b'Wi XY'k YY_Yb'X'g'Ub'X'di V']W'X'c']X'Umg'"H']g'Xc'Y'g'b'ch'Udd'm'hc'U'f'Ug_'h'U'h]g
UggYggYX'Vi hbc'a Uf_']g'Uk Uf'XYX"

K'cf_'gi Va]h'YX'Zci f'h'Y'b'f'f'X'Umg'U'Z'Y'f'h'Y'Xi Y'X'UH'k]'VY'a Uf_YX'UbX'Z'Y'X'V'U'W'd'fcj]XYX'Vi hbc'a Uf_
k]'VY'f'Y'W'f'X'YX" z'h'Y'k'cf_'k'ci 'X'\Uj'Y'f'Y'W'j'YX'U'd'Ugg'a Uf_'Vi h'Zcf'h'Y'UH'b'Y'gg'Ub'X'h'Y'k'cf_']g'U
W'ca di 'g'c'f'm'W'ci fgY'W'ca d'cb'Y'b'h'z'U'gh'XY'b'hk]'VY'XY'Ya YX'hc'\Uj'Y'a Y'h'h'U'h'f'Yei]f'Ya Yb'h'H']g'Xc'Y'g'b'ch
Udd'm'hc'U'f'Ug_'h'U'h]g'UggYggYX'Vi hbc'a Uf_']g'Uk Uf'XYX"

K'cf_'gi Va]h'YX'h'k'Y'b'h'c'b'Y'f'f'X'Umg'U'Z'Y'f'h'Y'Xi Y'X'UH'k]'b'ch'VY'U'W'W'd'h'X'Zcf'a Uf_]b['cf'Z'Y'X'V'U'W'
Ub'X'k]'f'Y'W'j'Y'bc'a Uf_'cf[f'U'XY" z'h'Y'UggYgga YbhHUg_g'U'W'ca di 'g'c'f'm'W'ca d'cb'Y'b'h'c'Z'h'Y'W'ci fgY'U
gh'XY'b'hk]'Ui 'ca Uh]W'U'm'ZU]'h'Y'W'ci fgY"

GdY'W'U'7'cbg]XYfU'h]cb'5dd']W'h]cbg

Mci 'Wb'Udd'm'Zcf'gd'Y'W'U'W'cbg]XYfU'h]cb'k \Yb']'b'Y'gg'c'f'c'h'Y'f'W'f'W a gh'Ub'W'g']b'h'f'Z'Y'f'k]h'nci f'
UggYgga Ybh'd'Y'f'Z'ca Ub'W"

G]W'b'Y'gg'z'a]g'U'X'j'Y'bh'f'Y'c'f'c'h'Y'f'W'f'W a gh'Ub'W'g'VY'nc'b'X'nci f'W'c'b'f'c''a Um

f'D'f'Y'j'Y'bh'nci 'Z'ca 'W'ca d'Y'h]b['U'W'ci fgY'f'Yei]f'Ya Yb'h'z'

f'?Y'Y'd'nci 'Z'ca 'U'h'Y'b'X]b['Ub'UggYggUV'Y'U'W'f]j]m'z'

f'G'h'd'nci 'gi Va]h]b['UggYggUV'Y'k'cf_'Zcf'U'W'ci fgY'z'

f`G][b]Z]WbhmUZZYWhmci f`dYfZcfa UbWV`]b`UggYggUV`Y`k cf_žVY`]hU`Zcfa U`YbX!cZgYa Yghf`YI Ua]bUh]cbžU
WUgg`hYghž`U`UVcfUhc`fmi`hYghž`U`gYa]bUf`dfYgYbUh]cb`cf`Ubmich`Yf`Zcfa`cZUggYgga`Ybh`

: cf`Z`fh`Yf`XYhU]`g`]b`fY`Uh]cb`hc`GdYWU`7`cbg]XYfUh]cb`]bWi`X]b[``K`Yb`hc`5dd`mž`<`ck`hc`5dd`m`UbX
`Gi`ddcfh]b[`8`cW`a`YbUh]cb`d`YUgY`fY`Zf`hc`h`Y`GdYWU`7`cbg]XYfUh]cb`k`YVgh]Y.`

[\hdg.#gh`XYbhi`bgk`"YXi`"Ui`#gdYWU`!Wcbg\]XYfUh\]cb](#)

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" #WUb`hU`Y`a Ubm
Zcfa gZ`Zca`XY`]VYfUHY`WXYU]b['hc`UWV]XYbU`mW`dm]b[`Zca`U`gci fW`k]hCi 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`hY`hcf`]XYU`k`]hCi 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[YgZ`UfhUbX`XYg][`b`dfc`YWgZ`Ug`k`Y`Ug`
dfYgYbhU]cbg`k` \Yf`gca`YcbY`dfYgYbh]b[`Ubc`h`Y`f`g`]XYUg`cf`k`cfXg`k`]hCi hW`YX]h`

#Uddfcdf]UHY`dUfUd`fUg]b[.`W`Ub[]b[`U`Zy`k`cfXg`UbX`d`fUgYg`k` \]Y`a`cghm`fYU]b]b['hY`cf][]bU`
g]fi`W`fY`UbX`]bZcfa`U]cb`k`]hCi hUW`bck`YX[Ya`Ybh`H`]g`U`gc`Udd`]Yg`]b`dfYgYbhU]cbg`k` \Yf`gca`YcbY`
dUfUd`fUgYg`Ubc`h`Y`f`g`]XYUg`cf`k`cfXg`k`]hCi hW`YX]h` #U`gc`Udd`]Yg`hc`d`]YW]b[`hc` [Y`h`Y`f`ei`chYg`UbX`
dUfUd`fUgYg`]bhc`U`b`Y`k`k` \c`Y`Z`k`]hCi hfY`ZYfYbW]b[`UbX`U`gh`XYbh`g`ck`b`UbU`mg]g`hc`V`f]b['hY`a`U`h`f]U`
hc` [Y`h`Y`f`

7c`i`g]cb.`k`cf_]b[`k`]h`chYfg`Vi`hdUgg]b[`cZ`h`Y`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`Ubc`h`Y`f`gh`XYbhVY`Zc`fY`h`Y`Xi`Y`XU`h`Zc`f`Zc`f`h`Y`di`fdcgY`cZ`h`Ya`
d`U[]Uf]g]b[`Uh`Ubmi]a`Y`Z`dUm]b[`Ubc`h`Y`f`dYfgcb`hc`dYfZcfa`Ub`UW`XYa`]W`h`g`_`Z`gh`U`]b[`cf`U`W`ei`]f]b[
Ubc`h`Y`f`dYfgcb`g`UW`XYa`]W`k`cf_]UbX`W`dm]b[`]Z`c`Z`Y`f]b[`hc`W`ca`d`Y`h`Ubc`h`Y`f`dYfgcb`g`k`cf_]cf`g`Y`Y_]b[
dUma`YbhZc`f`W`ca`d`Y`h]b[`UW`XYa`]W`k`cf_]`

#Uddfcdf]UHY`W`h]cb.`7`]h]b[`gci`fW`g`k` \]W` \Uj`Y`bchV`Y`b`fY`U`X`Z`k`]hCi hUW`bck`YX[]b['hY`"gY`W`bXU`fm`
gci`fW`Zc`a`k` \]W`_`bck`YX[Y`cZ`h`Ya` \Ug`V`Y`Y`b`c`V`h]bYX"

8i`d`]W`h]cb`f`f`gY`Z`d`U[]Uf]ga` "E`gi`Va`]h]b[`mci`f`ck`b`k`cf_]b`k` \c`Y`cf`]b`dU`f`Z`k` \YfY`]h`Ug`d`fYj`]ci`g`m`
V`Y`Y`b`dfY`dU`fY`X`cf`gi`Va`]hY`X`Zc`f`Ubc`h`Y`f`UggY`gga`Ybhcf`W`ei`fgY`U`hI`BGK`cf`Ubc`h`Y`f`i`b]j`Yfg]h`

7c`ffY`W`h`fY`ZY`fY`bW]b[`dfU`W`]W`g.

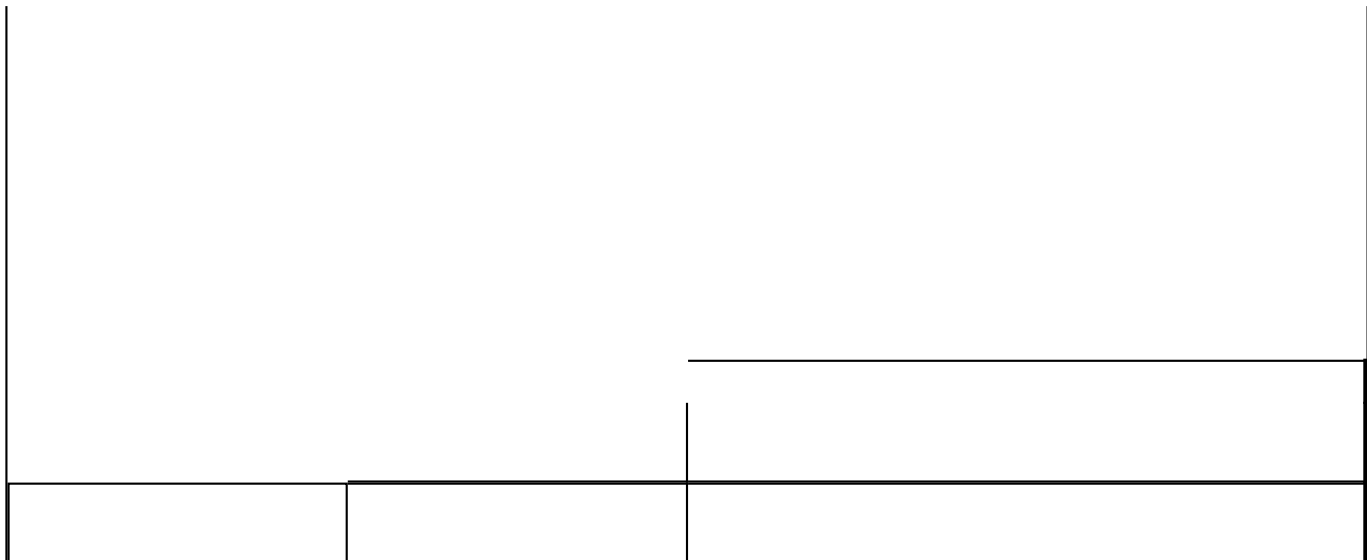
- VYhYf'a UbU[Y'mci f'hja Y

7 ci fgY'GWXYXi `Y

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

H]a`YhUV`Y`

8UH	HmdY	7cbhYbh
K YY_`%`&`*`:`YVfi`Ufm!`(` A`UfW	@YWi`fY	HfUbg`Uh`cb`UbX`]bhYfdFYh]b[`]b`UWUXYa`]WUbX dfcZYgg]cbU`gYH]b[`g" HU_Y`\\ca`Y`hYb`gYbhYbWg
K YY_`&`.`)`A`UfW`!`%`% A`UfW	Hi`hcf]U`	GYUfW]b[`Zcf`Yei`]j`U`YbW`UWfcgg`W`h`fYg" 6]!`]b[`i`U`dfYdUfUh]cb`UbX`fYgYUfW`"5`VW`fUWm`UbX Yei`]j`U`YbW`.]bhU`]b[`i`U`hfUbg`Uh]cb`fbUa`Ygž]X]ca`gŁ`GYUfW]b[`Zcf`Yei`]j`U`YbW`UWfcgg`W`h`fYg"
K YY_`"`.`%`&`A`UfW`!`%` A`UfW	@YWi`fY	5i`X]c!j`]gi`U`YWi`fY`HfUbg`Uh]cb`fGHd`Yb 8c`Yfht`"
	5ggYgga`Ybh	:`cftb][`\\hm5gg][`ba`Ybh`%`h`c`VY`gi`Va`]hYX`Vm(`da cb`%`*`A`UfW`.HfUbg`Uh`U`gY`YWYX`dUggU[`Y`UbX dfcj`]XY`U`VŁa`a`YbhUfmc`b`WU`Yb[`Yg`UbX hYXb]ei`Yg`i`gYX"
K YY_`(`.%`A`UfW`!`&` A`UfW	Hi`hcf]U`	HfUbgW]dh]cb`UbX`gi`Vh]b[
	@YWi`fY	5i`X]c!j`]gi`U`YWi`fY`.`bhYfdFYh]b[`fG`UbXfU`<`U`YŁ H\\]g`YWi`fY`]g`gWXYXi`YX`Zcf`K`YY_`(`ž]bgH`UX`cZ K`YY_`)`ž`h`Uj`c]X`U`WUg`\\`k`]h`hY`di`V`WŁc`]XUmicb :`f]XUm`\$`A`UfW`f]`ccX`:`f]XUmŁ`"
K YY_`(`.%`&`*`A`UfW`!`%` 5df]`	5ggYgga`Ybh	:`cftb][`\\hmUgg][`ba`Ybh`&`h`c`VY`gi`Va`]hYX`Vm(`da cb`&`-`A`UfW`.HfUbgW]VY`U`@`H9`j`]XYc`h`dfcj`]XY]bhU`]b[`i`U`UbX`]bhYf`]b[`i`U`gi`Vh]hYg"
6fYU_`&`5df]`!`,`5df]`		
K YY_`*`,`-`5df]`!`%`5df]`	Hi`hcf]U`	hYfdFYh]b[`]b`X]ZYfYbha`cXYg
K YY_`+`,`%`*`5df]`!`&& 5df]`	@YWi`fY	J`]XYc`YWi`fY`.7`fcgg!W`h`fU`]bhYfUW]cb`fBYVfU 5UfcbgŁ
	5ggYgga`Ybh	:`cftb][`\\hm5gg][`ba`Ybh`" `h`c`VY`gi`Va`]hYX`Vm(`da &\$`5df]`.Gi`Va`]hmc`i`f`HfUbgW]dhcZ`hY`gci`fW`UbX mci`f`]bhYfdFYh]cb`]b`H@
K YY_`,`(`&`5df]`!`&- 5df]`	Hi`hcf]U`	7`ca`a`i`b]WU]h]b[`W`h`fU`mVci`bX`hYfa`g`UbX VŁbW`drg`fVUgYX`cb`Zcf]b[`\\hmUgg][`ba`Ybh]`UbX fYZYW]j`Y`Y`Ya`YbhZca`hY`gi`Vh]b[`Ugg][`ba`YbŁ
K YY_`-`,`"``\$`5df]`!`*`A`Um	@YWi`fY	J`]XYc`YWi`fY`.DfcZYgg]cbU`9h]Mg]b`HfUbg`Uh]cb`/ hYfdFYh]b[`f@`Xa`]U`GHfŁ
	5ggYgga`Ybh	:`cftb][`\\hm5gg][`ba`Ybh(`h`c`VY`gi`Va`]hYX`Vm(`da cb`(`A`Um`Mci`WU`b`WŁcgY`mci`f`Ugg][`ba`YbhVUgYX cb`UbmicbY`cZ`hY`dfYj`]ci`g`a`cXYg`.HfUbg`Uh]cbž gi`Vh]b[`cf]bhYfdFYh]b[`cZ`Ub`Ui`X]c`cf`Uj`]XYc"



F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

- A U`a _`Ä fž? "/ `K]bX`Yž? "'&\$%%"`H\Y`C I žcFX`< UbXVcc_`cZHfUbg`Uhcb`Gh`X]Yg" `C I žcFX`I b]j Yfg]m DfYgg" `3hS[ST`WSf? S[]>[TcSck /&#*`ž \$!\$') fi[] fZW: [YZ GeWUa`WUf[a` /\$` V Xaad >[TcSck `Si` `W`Wfž 7`WUfca` [U Uabk S`ea ShS[ST`WSf fZWG@EI]>[TcSckž

F YWca a YbXYX`F Ygci fWg

K YY_%`Gi`gUb`6UggbYhž 7 \UdhYf`+"`HfUbg`Uhc`f`Ug`Wcgg!W`h`fU`a`YX]Uhc`fž`dd" - (-%\$, ž]b`H\Y`C I žcFX < UbXVcc_`cZHfUbg`Uhcb`Gh`X]Yg"

5`Wcbj`YfgUhcb`VYhk`YYb`GUbXfU

