



## ARTS1063

K c f X ' 7 ] b Y a U g . ' H f U b g b U h ] c b U ' ' D Y f g d Y W W ] j Y g

H Y f a ' H \ f Y Y ' ' # # ' & \$ % -



G W X c c ' ' c Z H A Y ' 5 f t g ' U b X ' A Y X ] U ' ' # ' I B G K ' ' 5 f t g ' U b X ' G c W ] U ' ' G W Y b W X g

7 ci fgY`Cj Yfj ]Yk

`GHZZ7cbhJW`i8YhJ]g`

`7cbj Ybcfg`



7ci fgY'8YHJ]`g

7fYX]hDc]bHg`\*`

Gi a a UfmicZh\Y'7ci fgY

H\]g`Wci fgY`]bfcXi Wg'mci`hc`U'k cfX'cZW]bYa Ug" `#iUg\_g'mci`hc`YI d'cfY'k \Uh\UddYbg'k \Yb'rk c'cf  
a cfY`W]bYa Ug'a YYH'`#iVcbZcbHg`hY`WU`Yb[ Yg'cZW'cgg]b[ `W`h fU`UbX'bU]cbU`VcfXYfg`hc`X]gWcj Yf`\ck  
W]bYa U`Yb[ U[ Yg'k ]h`a ][ fUbtz`X]Ugdcf]WUbX`YI ]]W]XYbh]h]Yg`UbX`YI dYf]YbW'gž`UbX'k ]h`]ggi Yg'cZ  
ZcfY][ bbYgg`UbX`cWU`UbX'k cfX`W]hYbg`d" `#g'cflz'mci`k ]`YI d'cfY`\ck`W]bYa U`XYU`g'k ]h`f`h`YfbYggf`i  
#ik ]`YbUV`Y`mci`hc`UWci ]fY`h`Y`W]h]W`UbX`UbU`m]W]`g\_]`g`hc`ghi Xmh`Y`W`bH`bž`ghmYž`dfcXi W]cb`UbX



5ggYgga Ybh

5ggYgga YbhHUg\_g`

5ggYgga YbhHUg_	K Y][ \h	8i Y'8UHr	Gh XYbh@YUfb]b[ Ci hWta Yg'5ggYggYX
7 f]h]WU': ]a 'F Yj ]Yk`	' \$i	,\$ #/\$#&\$%- '%%\$\$'DA	&Z
Hi hcf]U`[ fci d'dfYgYbhUH]cb'Z ]bX]j ]Xi U`W]h]ei Y`	' \$i	Bch5dd`]WUVY	%z&Z
G\cfhYggUm	( \$i	K YY_`%\$'Hi hcf]U`g	%z&Z

5ggYgga Ybh8YhU]`g

8YHJ]g. 'ə'h\Y'Z]bU'h' hcf]U'žgh' XYbhg'k ]''\Uj'Y'%) '\ci'fg']b'k'\]W'hc'k'f]h'UbX'gi'Va ]hU'g\cfh'YggUmicb'U  
hcd]WfY'Uh]b[ 'hc'k'cfX'W]bYa'Ug'Z'ca' 'U'hfUbgbU]cbU'dYfgdYW]j'Y''H\Y'gdYW]Z]W]hcd]W]Z'ca' 'k'\]W'h\Y'mia'Um  
W'ccgY'k ]''VY'[ ]j'Yb'hc'h\Ya' ]b'WUgg''H\Y'mk ]''fYV]j'Y'k'f]h'Yb'ZYXVUW'j ]U'h\Y'@A'G''H\Y'a'Uf\_'Z'f'h\Y'  
YI'Ua' 'k ]''VY']b'W'cf'dcfU'h'X' ]b'h\Y'Z]bU'a'Uf\_'Z'f'h\Y'W'ēi'fgY'Ug'dYf'h\Y'fY'Uh]j'Y'UggYgga'Ybhk'Y][\h]b[ 'g"

Hi'fb]h]b'gYh]b[ . 'H\]g']g'bchU'Hi'fb]h]b'Ugg][ba'Ybh

5 hYbXUbW F Yei ]fYa YbHg

Gh XYbHg UFY gHfcb[ mYbWci fU[ YX'hc UHhYbX'U''WUggYg UbX'fYj ]Yk ''YWh fY'fYWcfX]b[ g"

7 ci fgY'GWXYXi `Y

[J \]Yk WUgg'ha YhUVY](#)

H]a YhUV`Y`

8UhY	HmdY	7cbhYbh
K YY_%`%*`GYdhYa VYf! &\$`GYdhYa VYf	Hcd]W	K cfX'7]bYa U.`F Y!h]b_]b[ `B U]cbU`7]bYa U
K YY_&.`&`GYdhYa VYf! &+`GYdhYa VYf	Hcd]W	5WVbYX'7]bYa U.`9I ]]WZfYZ [ YYzX]Ugdcf]W Z]a a U_Yfg
K YY_."`." \$GYdhYa VYf! ( `C WcVYf	Hcd]W	: ]fghB U]cb'7]bYa U
K YY_(`.`+ C WcVYf!`%% C WcVYf	Hcd]W	7]bYa U`UbX'hY`C hYf
K YY_)`.%( `C WcVYf!`% C WcVYf	Hcd]W	8ci VY`C W dUbWn
K YY_*`.&%C WcVYf!`&) C WcVYf	Hcd]W	6F 95?`K 99?.`Bc`Zcfa U`WUggYg'h]g`k YY_"
K YY_+.`&.`C WcVYf!`% Bcj Ya VYf	Hcd]W	Nca V]Yg`K ]hci h6cfXYfg
K YY_`,`.( `Bcj Ya VYf!`,` Bcj Ya VYf	Hcd]W	: fca`<cb[ `?cb[ `hc`<c`nk ccX.`A Ufh]U`5fHg`9Ugh UbX`K Ygh
K YY_`-`.%%Bcj Ya VYf! %) `Bcj Ya VYf	Hcd]W	: ]a`:`Ygh] U`g
K YY_`%\$.`% `Bcj Ya VYf! &&`Bcj Ya VYf	Hcd]W	F Y[ ]cbU`>Ybh]Yg.`5`7 Ugy`Gh Xmih`fci [ \ GWbX]bUj ]Ub`7]bYa U

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

GYY`A ccX`Y`Zcf`XYHJ]g`cb`9ggYbh]U`F YUX]b[ g`Zcf`U``k YY\_g"

F YWca a YbXYX`F Ygci fWg



Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

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

≠mci`YbWci bhYf`U`dfcV`Ya`k`Yb`U`hYa`dh]b[`hc`gi Va`]hmcif`Ugg][`ba`Ybh`h`fci`[\`Hi`fb]h]bzd`YUgY`h`Yd`cbY`9I`h`fbU`Gi`ddcfhcb`-`,`)`''`%cf`Ya`U]`h`Ya`c`%YI`h`fbU`h`hgi`ddcfh`i`bgk`"YXi`"U%`bE

# 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.

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[ 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`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'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 ]Wg'UbX' ]bZcfa Uhcb'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#UVci h' \]gY](#)

