

# ARTS3450

5Xj UbWX`7 \]bYgY`5

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

7 ci fgY`Cj Yfj ]Yk

`GHUZZ`7 cbhUW`8YHJ`g`

`7 cbj Ybcfg`

B Ua Y	9a Uj`	5j Uj`UVj`]m		



cf][ ]bU`cf`WfhjZYX`WdmcZU`a YX]W`WfhjZWU`cf`ch`Yf`Zcfa`cZUddfcdf]UH`Yj ]XYbW`"

5`7ci fgY`5i hcf]ma UmYI W gY`U`gh XYbhZca`WUggYg`cf`UW]j ]hYg`Zcf`i d`hc`cbY`a cbh`"<ck Yj YfZ`hYm  
a UmUgg][ b`UXX]h]cbU`UbX`#f`U`H`fbU]j Y`hUg\_g`hc`Ybgi fY`Wca d`]UbW`"5`7ci fgY`5i hcf]mWcbg]XYf]b[ `hY  
[ fUbh]b[ `cZUVgYbW`a i ghVY`gUhgZ]YX`U`gh XYbhk ]`gh`VY`UV`Y`hc`a YYh`hY`W`i fgY`g`YUfb]b[ `ci hW`a Yg  
UbX`#f`j c`i a Y`cZ`YUfb]b[ "5`gh XYbhgYY\_]b[ `Uddfcj U`hc`VY`UVgYbhZcfa`cfY`hU`b`cbY`a cbh`a i ghUdd`m  
]b`k`f]h]b[ `hc`hY`8Y`Ub`UbX`dfcj ]XY`U`cf][ ]bU`cf`WfhjZYX`gi ddcf]b[ `XcW`a YbhU]cb"

: cf`a cfY`]bZcfa U]cb`UVci h`hY`UH`bX`UbW`dfc`hc`W`g`]b`hY` : UW`hmcZ5f]g`UbX`GcW]U`  
GW]YbW]g. [\hfdg.#k k k "Uf\]g"i b\]k "YXi "Ui #W ffYbh\]gh XYbh\]g#UW\]XYa \]W\]bZcfa U\]cb#dfc`hc`W`g!\[ i \]XY`\]bYg#](#)

## 5W]XYa ]W]bZcfa U]cb`

: cf`YggYbh]U`gh XYbh]bZcfa U]cb`fY`U]b[ `hc`fYei Yg]g`Zcf`YI`H`bg]cb/fYj ]Yk`cZa Uf\_g/cW]W`dU]cbU`hYU`h  
UbX`gUZ]m`YI`Ua ]bU]cb`dfcW]Xi fYg/gdYW]U`Wcbg]XYfU]cb`]b`hY`Yj Ybh]cZ]`bYgg`cf`a ]gUXj Ybh`fY/  
gh XYbhYei ]mUbX`X]gUV]`]m`UbX`ch`Yf`YggYbh]U`UW]XYa ]W]bZcfa U]cbž  
gYY`[\hfdg.#k k k "Uf\]g"i b\]k "YXi "Ui #W ffYbh\]gh XYbh\]g#UW\]XYa \]W\]bZcfa U\]cb#dfc`hc`W`g!\[ i \]XY`\]bYg#](#)

7 ci fgY`8YHJ]`g

7 fYX]hDc]bHg`\*`

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

Gi V`YWh5fYU. `5Z[ `W`WE fgV[W`

H\]g`Wci fgY`dfcj ]XYg`UXj UbVWX`h ]hcb`]b`7`]\bYgY`Ub[ i U[ Y`fA UbXUf]bE`gh X mž i g]b[ `U`hYI hVcc`\_XYg][ bYX  
gdYW]Z]WU`miZcf`UXj UbVWX`7`]\bYgY`YUfbYfg`Uhi b] Yfg]hYg`ci hg]XY`cZ7`]\bU`hW`a V]bYgY`Ub[ i U[ Y`ghi X]Yg  
k ]h`Ub`YI d`cfU]hcb`cZ7`]\bYgY`W`h fY`UbX`gcW]Yhmž]bWi X]b[ `fUX]h]cbU`W`h fY`H\Y`a YX]i a `cZ  
]bghfi W]cb`]g`A UbXUf]b`Mci `W`b]bi Y`hc`XYj Y`cd`UbX`YI hY`bX`mci f`i bXYfg]hUbx]b[ `UbX`i gY`cZ7`]\bYgY  
`Ub[ i U[ Y`žYgdYW]U`mia cFY`gdYW]U`]nYX`j cW]Vi `UfmUbX`W`a d`YI `gYb]h]bW`ghfi W`h fYg`H\Y`Ya d`Ug]g]g`cb  
hY`fUbgZcf`a U]hcb`cZ`]b[ i ]gh]W`\_bck`YX[ Y`]b]hc`UW]j Y`g\_]`g`h]fci [ \ `cfU`UbX`k f]hYb`UW]j ]h]Ygž`ZcW`g]b[ `cb  
Ui hYb]h]W7`]\bYgY`hYI hg`Vmi h]g]b[ `j Uf]ci g`fYUX]b[ `gfU]h [ ]Yg`H\Y`W`c]W`cZ`hYI hUbX`fY`U]hX`a U]h]f]U`g  
UfY`VUgYX`cb`hk`c`W]h]f]U. `h`H\Ymg`ci `X`gYfj Y`Ug`U`gUa d`Y`cZVYgh`Ub[ i U[ Y`Zcf`gh XYb]hg`hc`YUfb`UbX  
]a ]hU]h]Ubx`&E`H\Y`W`b]h]b]hg`cZ]YUW`hYI hg`ci `X`\Uj Y`U`gh]fcb[ `fY`Yj UbVW`k ]h`W`fYb]h]7`]\bYgY`gcW]Yhm  
UbX`W`h fU`fUX]h]cb`H\Y`hYI hg`W`ej Yf`U`k ]XY`fUb[ Y`cZ]hd]W]g]b`7`]\bYgY`Ub[ i U[ Y`žW`h fY`UbX`gcW]Yhmž  
]bWi X]b[ `U`gdY]YW`Vmia cgh]fYbck bYX`k f]h]fž`UbX`hY`B`cVY`df]nY`k ]bbYf`Zcf`]h]fU]h fYž`A`f`A`c`M]b`33`  
H\YgY`W]fYZ`mW`cgYb`hYI hg`k ]`gYfj Y`Ug`U`k ]bXck`h]fci [ \ `k`]\W`mci `k ]`gY]7`]\bU`Uhk cf`\_ž`ZY`]b[ `]hg`  
c[UbX`[ fYU]h]Ygg`k`]\Y`UfY`U`gc`Uk UfY`cZ]hg`W`U`Yb[ Yg`UbX`dfcV`Ya`g`

5 h`h\Y`W`bWi`g]cb`cZ`h]g`W`ci fgY`h\Y`gh XYbhk ]`VY`UV`Y`hc

%`8Ya`cbgh]U]h]Zi`YbW]h]UbX`W`b]Z]X

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%oo

YI dYfjYbWg"

# 5ggYgga Ybh

## 5ggYgga YbhHUg\_g`

5ggYgga YbhHUg_	K Y][ \ h	8i Y`8UHŸ	Gh XYbh@YUfb]b[ Ci hWta Yg`5ggYggYX
7i`hi fU`7ca dcbYbh	&\$i	E i ]n`%`cb`%+##\$ ( #&\$% `fk YY_` +L/E i ]n`&`cb`&#&\$) #&\$% fk YY_`%&L	(
; fci d`F YgYUfW`Dfc`YWŸg`	( \$i	HfUbg`UH]cbg`Xi Y`]b`k YY_g` ' ž`ž- ž%`/ 7`Ugg`dFYgYbhUH]cb` Xi Y`]b`k YY_g``%\$ž`%`cf`%&/ UbX`fYgYUfW`dUdYf`Xi Y`cbY` k YY_`UZŸf`hY`dFYgYbhUH]cb`"	%ž&ž ž)
HYgh%	&\$i	&\$#\$( #&\$% `-\$`.\$\$`5A	%ž&ž ž(
HYgh&`	&\$i	\$\$#* #&\$% `-\$`.\$\$`5A	%ž&ž ž(

## 5ggYgga Ybh8YHU]`g

### 5ggYgga Ybh%`7i`hi fU`7ca dcbYbh

GHUfhXUHŸ.`

8YHU]`g. Gh XYbŸg`UfY`[ ] Yb`hk c`]b!WUgg`ei ]nnYg`fl \$`a ]bi hŸg`YUWŸL`": YYXVUW\_`j ]U`fi Vf]WUbX`]b!WUgg`X]gW`gg]cb`"

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

### 5ggYgga Ybh&.`; fci d`F YgYUfW`Dfc`YWŸg`

GHUfhXUHŸ.`

8YHU]`g. Gh XYbŸg`Wta d`YH`hk c`[ fci d`dfc`YWŸg. %L`HfUbg`UH]cb`f%\$i Lž`UbX`&L`F YgYUfW`cb`hY]f`WcgYb`  
hcd]Vžk` \ ]W`]W`XYg`U`fYgYUfW`dUdYf`gi Va ]hYX`cb!`]bY`f%) i Lž`Ug`k Y`Ug`U`[ fci d`dfYgYbhUH]cb`f%) i L`  
H\Y`WUgg`dFYgYbhUH]cb`fl`a ]bi hŸg`dYf`dYf`gcbL`]g`UggYggYX`cb`]bX]j ]Xi U`VUg]gžk` \]Y`hY`fYgYUfW`dUdYf`  
f%) \$!&\$\$\$`W`UfUWŸf`gŁ`fYWŸ]j Yg`cbY`a`Uf\_`": YYXVUW\_`j ]U`fi Vf]WUbX`]b!WUgg`X]gW`gg]cb`"

Hi fb]h]b`gYH]b[ . H\]g`Ugg][ ba Ybh]g`gi Va ]hYX`h`fci [ \`Hi fb]h]b`UbX`gh XYbŸg`Xc`bchgY`Y`Hi fb]h]b`  
g]a ]Uf]hmfYdcfŸg`"

### 5ggYgga Ybh` . HYgh%

GHUfhXUHŸ.`

8YHU]`g. 7ca dFY`Ybg]j Y`hŸghcZ`hY`Z]fghZ`k`W`UdH`fg`f%)` \`ci fgŁ`": YYXVUW\_`j ]U`]bX]j ]Xi U`Wta`a`YbŸgž`  
fi Vf]Wž`UbX`]b!WUgg`X]gW`gg]cb`"

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

5ggYgga Ybh(. :HYgh&

GHUfhXUHY. :

8YHU]`g. :7ca dfY\Ybg]j Y`hYgh`f%) ` \ci fgk'cZkY`UghZYk`WkUdhYfg`g]bW`HYgh%"Gh`XYbhg`fYW`j] Y`U`a Uf\_ UbX`Wb`Wcbgi`h`h`Y`h`UWk]b[ `ghUZZZcf`Z`f`h`Y`f`ZYXVUW`"H\]g`]g`h`Y`Z]bU`UggYgga YbhZcf`U`h`Y`b`X`U`b`W` di`fdcgY"

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

## Gi Va ]gg]cb'cZ5ggYgga YbhHUg\_g

Gh XYbng'UFY'YI dYWVX'hc'di hHAY'f'buA Yg'UbX'ghi XYbhbi a VYfg'cb'Yj YfmdU[ Y'cZHY]f'Ugg][ ba Ybng"

## Hi fb]hb'Gi Va ]gg]cb

znci 'YbWci bHY'U'dfcV'Ya 'k \Yb'UHYa dh]b[ 'hc'gi Va ]hnci f'Ugg][ ba YbhHfci [ \ 'Hi fb]hbzd'YUgY  
HY'Yd\cbY'9I HYfbU'Gi ddcfhcb'-' , ) "' ' ' %cf'Ya U]'HYa 'cb'[YI HYfbU'HY'fji ddcfh4 i bgk "YXi "Ui "](#)"Gi ddcfh  
\ci fg'UFY' , \$\$Ua '-%\$. \$da 'cb'k YY\_XUmg'UbX'-' . \$Ua '-) . \$da 'cb'k YY\_YbXg'f1 \*) 'XUmg'U'mYUfL'"znci  
UFY'i bUV'Y'hc'gi Va ]hnci f'Ugg][ ba YbhXi Y'hc'U'ZU' 'hk ]H'Hi fb]hb'nci 'a UmiUdd'mZcf'Ub'YI HYbg]cbz'Vi hnci  
a i ghfYU]b'nci f'h]W'Yhbi a VYfZca '9I HYfbU'Gi ddcfhfU'cb[ 'k ]H'UbmcH'Yf'fY'Yj UbhXcW a Ybng'hc  
]bWi XY'Ug'Yj ]XYbW'hc'gi ddcfhnci f'YI HYbg]cb'Udd'jW]hcb'"znci 'Ya U]'9I HYfbU'Gi ddcfhnci 'k ]'  
Ui 'ca Uh]W'm'fYW'j] Y'U'h]W'Yhbi a VYfz'Vi h]Znci 'HY'Yd\cbY'nci 'k ]'b'YX'hc'gdYW]Z]W'm'Ug\_'Zcf'cbY"  
Hi fb]hb'U'gc'dfcj ]XYgi dXUH'g'cb'HY]f'gmgHYa 'ghU'g'cb'Hk ]HYf"

; YbYfU'mz'UggYgga YbhHUg\_g'a i ghVY'gi Va ]HYX'Y'YWfcb]W'mj ]U'Y]H'Yf'Hi fb]hb'cf'U'A ccX'Y  
Ugg][ ba YbH' 'b ]bgH'UbW'g'k \YfY'h]g' ]g' bchdcgg]V'YZ'hk ]'VY'g'UH'X'cb'nci f'Wci fgY'g'A ccX'Y'g]HY'k ]H  
U'HYfbUH] Y'gi Va ]gg]cb'XYU]g"

## @UH'5ggYgga YbhDYbU'h]Yg

5b'UggYggYX'fUg\_' ]g'XYYa YX'UH' ]Z]h]g'gi Va ]HYX'UZ'Yf'HY'gdYW]YX'h]a Y'UbX'XUH'Ug'gYhci h]b'HY  
Wci fgY '@YUfb]b[ 'A UbU[ Ya YbhGmgHYa 'f@A G'L"

H\Y'UH'dYbU'h]m]g'HY'cgg'cZ) i 'cZHY'hcU'dcgg]V'Ya Uf\_g'Zcf'HY'fUg\_'Zcf'YUW'XUmcfdUfhHYfYcZHY  
k cf\_' ]g'UH'"@UH'bYgg'k ]' ]bWi XY'k YY\_YbXg'UbX'di V]W\c' ]XUmg" H\ ]g'XcYg'bchUdd'mhc'U'fUg\_'hUh]g  
UggYggYX'Vi hbc'a Uf\_' ]g'Uk UfXYX"

K cf\_'gi Va ]HYX'Zci fHYb'f%('XUmg'UZ'Yf'HY'Xi Y'XUH'k ]'VY'a Uf\_YX'UbX'Z'YXVUW'dfcj ]XYX'Vi hbc'a Uf\_  
k ]'VY'fYW'fXYX'"zHY'k cf\_'k ci 'X'\Uj Y'fYW'j] YX'U'dUgg'a Uf\_'Vi hZcf'HY'UH'bYgg'UbX'HY'k cf\_' ]g'U  
Wca di 'gcfmWci fgY Wca dcbYbH'U'ghi XYbhk ]'VY'XYYa YX'hc'\Uj Y'a YhH'UHfYei ]fYa YbH'H\ ]g'XcYg'bch  
Udd'mhc'U'fUg\_'hUh]g'UggYggYX'Vi hbc'a Uf\_' ]g'Uk UfXYX"

K cf\_'gi Va ]HYX'k Ybhmcby'f&%('XUmg'UZ'Yf'HY'Xi Y'XUH'k ]'bchVY'UW'W'dHY'Zcf'a Uf\_]b[ 'cf'Z'YXVUW\_  
UbX'k ]'fYW'j] Y'bc'a Uf\_'cf[ fUXY'"zHY'UggYgga YbhHUg\_g'U'Wca di 'gcfmWca dcbYbhczHY'Wci fgY'U  
ghi XYbhk ]'Ui 'ca Uh]W'm'ZU]'HY'Wci fgY"

## GdYW]U'7cbg]XYfUH]cb'5dd' ]W]h]cbg

Mci 'Wb'Udd'mZcf'gdYW]U'Wcbg]XYfUH]cb'k \Yb' ]'bYgg'cf'ch'Yf'W]FW a ghUbW'g' ]bHYfZ'Yf'k ]H'nci f  
UggYgga YbhdyfZ'ca UbW"

G]W\_bYggza ]gUXj Ybhi fY'cf'ch'Yf'W]FW a ghUbW'g'VYncbX'nci f'W'blfc''a Um

f'DfYj Ybhnci 'Zca 'Wca d'Yh]b[ 'U'Wci fgY'fYei ]fYa YbH'

f'?YYd'nci 'Zca 'UH'YbX]b[ 'Ub'UggYggUV'Y'UW]j ]mz

f'Ghd'nci 'gi Va ]hb[ 'UggYggUV'Y'k cf\_'Zcf'U'Wci fgYz



f`G][ b]Z]W]b]h]m]U]Z]Y]W]h]m]i] f]d]Y]f]Z]c]f]a] U]b]W]W] ]b]U]g]g]Y]g]g]U]V]`]Y]`]k] c]f]\_]Z]V]Y]`]h]U]`]Z]c]f]a] U]`]Y]b]X]!]c]Z]g]Y]a] Y]g]h]Y]f]`]Y]I] U]a] ]b]U]h]c]b]Z]U] W]U]g]g]`]h]Y]g]h]Z]U]`]U]V]c]f]U]h]c]f]m]h]Y]g]h]Z]U]`]g]Y]a] ]b]U]f]d]f]Y]g]Y]b]h]U]h]c]b]`]c]f]U]b]m]i]c]h]Y]f]`]Z]c]f]a] `]c]Z]U]g]g]Y]g]g]a] Y]b]h]

: c]f]`]Z] f]h]Y]f]`]X]Y]h]U]`]g]`]b]`]f]Y]`]U]h]c]b]`]h]c]`]G]d]Y]W]U]`]7]c]b]g]X]Y]f]U]h]c]b]`]b]W]i] X]b]b] [ ``]K] \]Y]b]`]h]c]`]5]d]d]`]m]Z]``<]c]k]`]h]c]`]5]d]d]`]m]`]U]b]X] ``]G]i] d]d]c]f]h]b] [ `]8]c]W] a] Y]b]h]U]h]c]b]``]d]`]Y]U]g]Y]`]f]Y]Z]f]`]h]c]`]h]Y]`]G]d]Y]W]U]`]7]c]b]g]X]Y]f]U]h]c]b]`]k] Y]V]g]h]Y]`].`

[\\]h\]c\]g.\]#\]g\]h\] X\]Y\]b\]h\]i\] b\]g\]k\] "Y\]X\]i\] "U\]i\] #\]g\]d\]Y\]W\]U\]`\]!\]W\]c\]b\]g\]X\]Y\]f\]U\]h\]c\]b\]](#)

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`YfY`gca`YcbY`dfYgYbh]b[ `Ubc`hY`f`g`]XYUg`cf`k`cfXg`k`]hCi hWYX]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`YfY`gca`YcbY`  
dUfUd`fUgYg`Ubc`hY`f`g`]XYUg`cf`k`cfXg`k`]hCi hWYX]h` #U`gc`Udd`]Yg`hc`d`]YW]b[ `hc`[ Y`hY`f`ei`chYg`UbX`  
dUfUd`fUgYg`]bhc`U`bYk`k`c`Y`Z`k`]hCi hfY`ZYfYbW]b[ `UbX`U`gh`XYbh`g`ck`b`UbU`mg]g`hc`Vf]b[ 'hY`a`U`hY`f]U`  
hc`[ Y`hY`f`"

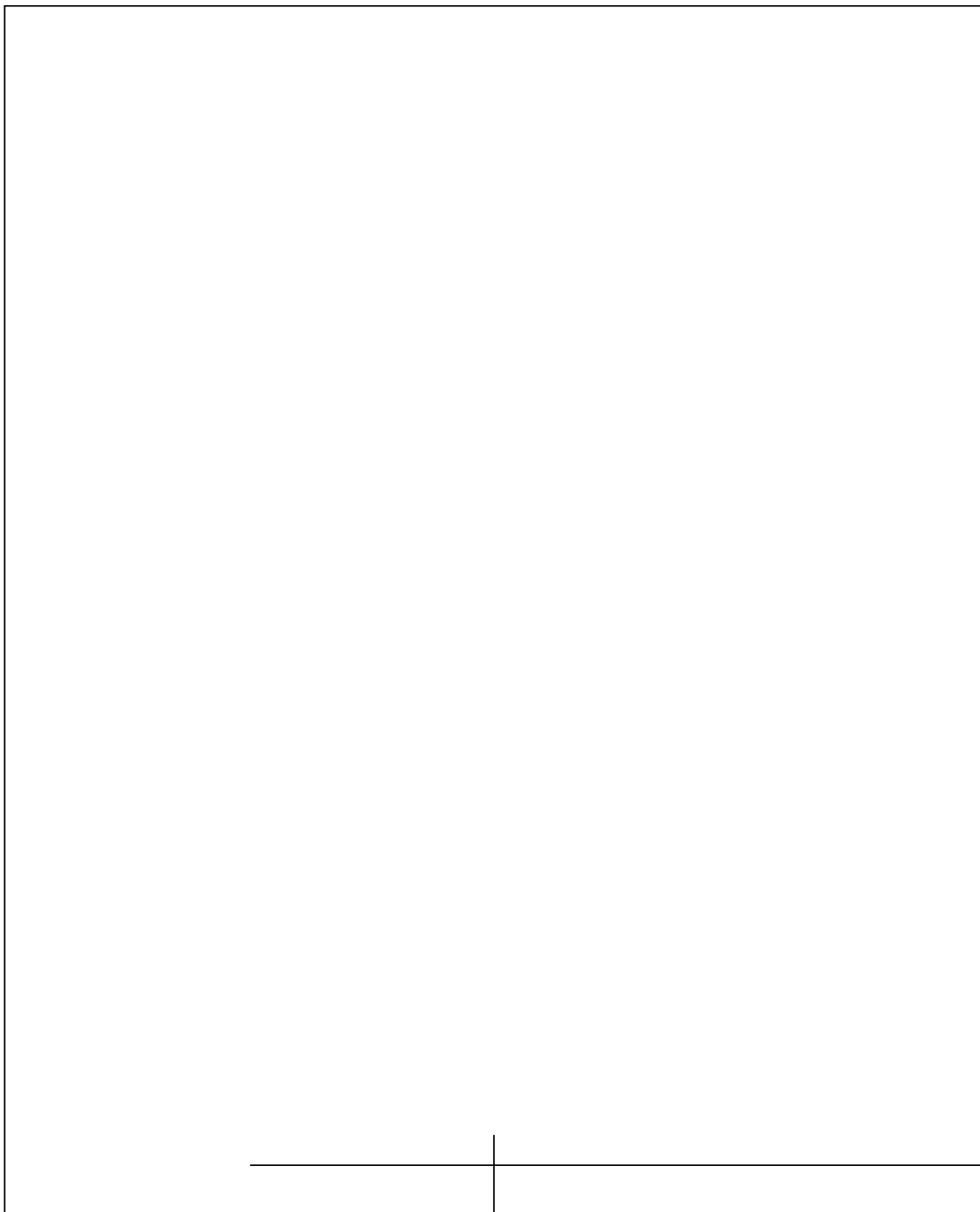
7c`i`g]cb.`k`cf\_]b[ `k`]h`chYfg`Vi`hdUgg]b[ `cZ`hY`k`cf\_]Ug`U`dYfgcb`g`]bX]j`Xi`U`k`cf\_]7c`i`g]cb`U`gc`  
]bWi`XYg`dfcj`X]b[ `mci`f`k`cf\_]hc`Ubc`hY`f`gh`XYbhVY`Zc`fY`hY`Xi`Y`XU`hY`Zc`f`Zc`f`hY`di`fdcgY`cZ`hY`a`  
d`U[ ]Uf]g]b[ `Uh`Ubmi]a`Y`Z`dUm]b[ `Ubc`hY`f`dYfgcb`hc`dYf`Zc`fa`Ub`UWUXYa`]W]Ug`\_`Z`ghU`]b[ `cf`UW`ei`]f]b[  
Ubc`hY`f`dYfgcb`g`UWUXYa`]Wk`cf\_]UbX`W`dm]b[ `]Z`c`ZYf]b[ `hc`W`ca`d`Y`hY`Ubc`hY`f`dYfgcb`g`k`cf\_]cf`gYY\_]b[  
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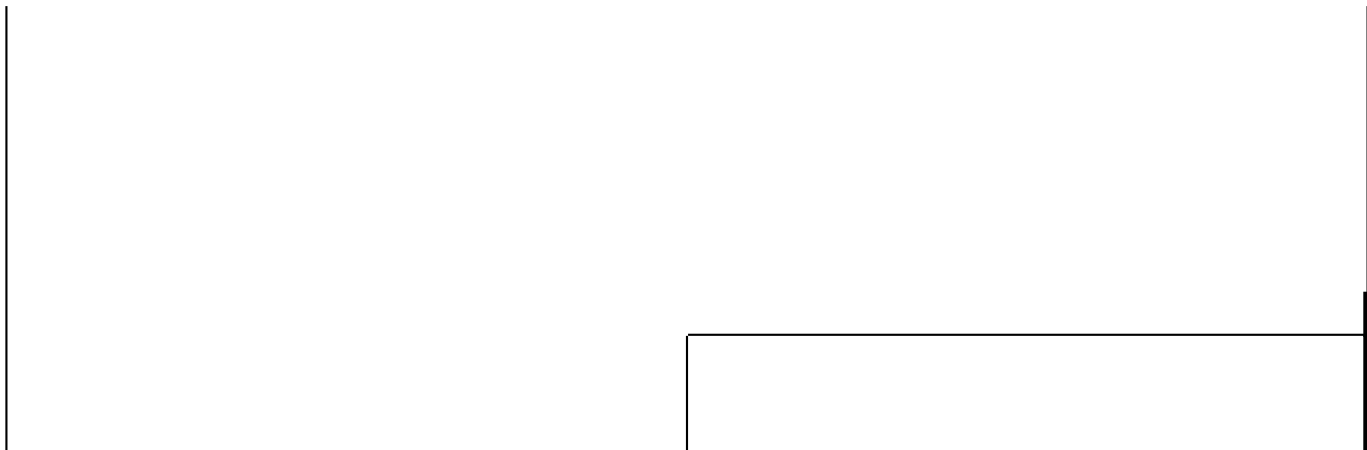
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gci`fW`Zca`k`]W`\_bck`YX[ Y`cZ`hY`a`U`g`VYYb`cV]U]bYX`"

8i`d`]WU]cb`ffgY`Zd`U[ ]Uf]ga`"E`gi`Va`]h]b[ `mci`f`ck`b`k`cf\_]b`k`c`Y`cf`]b`dUf`Z`k`YfY`]h`Ug`dfYj`]ci`g`m`  
VYYb`dfYdUfYX`cf`gi`Va`]hY`X`Zc`f`Ubc`hY`f`UggY`gga`Ybhcf`W`ei`fgY`U`hI`BGK`cf`Ubc`hY`f`i`b]j`Yfg]m`"

7c`ffY`W`fY`ZYfYbW]b[ `dfUW]W]g.

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





F Ygci fWg

DfYgW]VYX F Ygci fWg