

ARTS2452

 $7 \]bYgY \ 9b[\]g\ HfUbg\ Uh]cb$

HYfa 'C bY''##'&\$%

7ci fgY 8YHJ] g

7 fYX]hDc]bhg *

Gi a a UfmcZh\Y 7ci fgY

Gi VYWn5fYU. 5Z[WeWEfgV[We

H\]g`Wci fgY`YI d`cfYg`fYW\bhiffUbg`Uh]cb'h\Ycf]Yg`UbX`a Yh\cXc`c[]Ygž'Ug`k Y```Ug'h\Y`fc`Y`cZhfUbg`Uhcfg`]b a cXYfb'a i `h]!W``hi fU``gcW]Yh]Yg"'Mci `k]````YUfb'\ck 'hc'hfUbg`UhY`VYhk YYb'7\]bYgY'UbX'9b[`]g\ži g]b[X]ZYfYbhiffUbg`Uh]cb'h\Ycf]Yg'UbX'hYW\b]ei Ygž'UbX'\ck 'hc'XYj Y`cd']bX]j]Xi U`]gYX'ghfUhY[]Yg`Zcf`mci f hfUbg`Uh]cb'h\UhihUd']bhc'mci f`ck b'WUdUW]hmUbX'ghfYb[h\'UbX'Z fh\Yf`YI dUbX']h''Mci 'k]``XYj Y`cd'UbX'\cbY mci f`g_]``g']b'hUW_`]b['X]ZZYfYbhghmYg'cZhfUbg`Uh]cb'h\fci [\'j Uf]ci g'\UbXg!cb'hfUbg`Uh]cb'YI YfW]gYg"

7 ci fgY @YUfb]b[Ci hWca Yg

- %"]XYbhJzmfYVWbhXYj Y`cda Ybhg`]b`hfUbg`UhJcb`h\Ycf]Yg`UbX`dfUWJWYg`UbX`YI d`U]b`Uh`YUghcbY`VUg]WhfUbg`UhJcb`acXY`#qhm`Y
- &" UggYgg`bYk `HYW\b]ei Yg`UbX`HYW\bc`c[]Yg`Uj U]`UV`Y`Zcf`9b[`]g\`UbX`7\]bYgY`HfUbg`Uh]cb
- ' " HUW_Y'HUbg`Uhjcb`]b'U'dfcV`Ya !VUgYXžcVYWhj Y!cf]YbhYX'a UbbYfžYa d`cmjb['WcbWYdhgž hYfa]bc`c[mUbX``c[]WU`'- \UmifYWbg`Uhjcb`]b'cca Yg

@Yb[h\."\$!() a]bi hYg YUW

8YHJ]`g. `Ghi XYbhg`Wca d`YhY`(`]b!WUgg`hfUbg`Uh]cb`Yl YfW[gYg": YYXVUW_j]U`]bX]j]Xi U``Wca a Ybhg`UbX`]b!WUgg`X]gW gg]cb"

5ggYgga Ybh' . FYgYUfW Dfc YWh

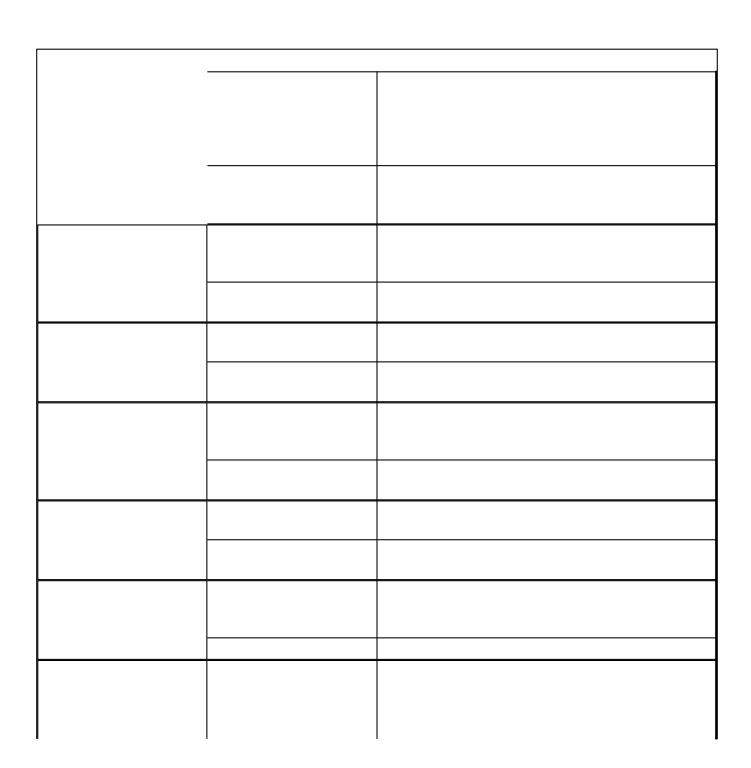
GhUfhXUhY. Bch5dd`]WUV`Y

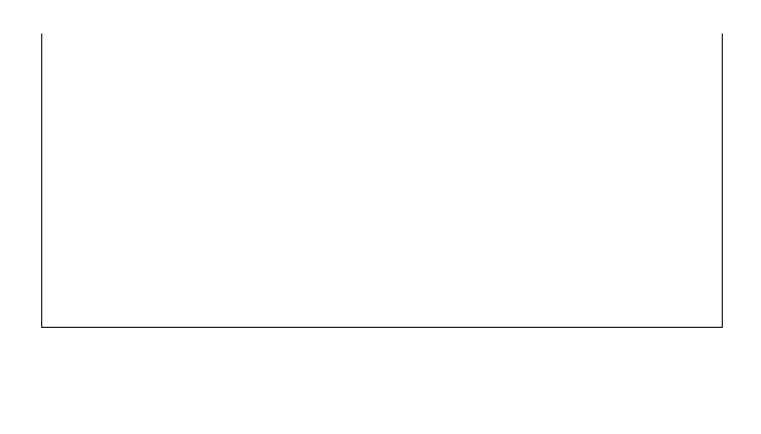
5ggYgga Ybh (. HYghg

GhUfhXUhY. Bch5dd`]WUV`Y

@Yb[h\. '%")!&"\ci fg YUW\

8YHJ]`g. `Ghi XYbhg`k]```Wca d`YhY`U`a]X!hYfa `hYghf&\$i E'UbX`U`Z]bU``hYghf&\$i E'': YYXVUW_`cb`a]X!hYfa `hYgh j]U`]bX]j]Xi U``Wca a Ybhg`UbX`]b!WUgg`X]gWi gg]cb/Ghi XYbhg`k]``fYWY]j Y`U`a Uf_`Zcf`h\Y`Z]bU``hYghUbX`WUb Wcbgi `h'h\Y``YWhi fYf`Zcf`Zl fh\Yf`ZYYXVUW_"





F Ygci fWyg

DfYgWf]VYX F Ygci fWYg

5 ```fYUX]b['a UhYf]U`g'UfY'Uj U]`UV`Y']b'A ccX`Y"

FYWca a YbXYX FYgci fW/g

6cc_g

A U'a _ $^{\hat{A}}$ fž?]fghYb/K]bX`Yž? Yj]bžFZWA j XadV : S` VTaa] aXFdS` e'Sf[a` E fgV[WežC I ZcfX`I b]j Yfg]hm DfYggž&\$\%"`f9Vcc_'Uj U]`UV`Y`UhI B G K ``]VfUfmŁ

A]``1/2bz`7UfaYb`YX''''FZWDagf^WYWZS`VTaa]aXfc5`e'Sf[a`efgV[Wez'<cVc_Yb.'HUmcf'UbX':fUbW]gz'&\$%"f9Vcc_'UjU]`UV`Y'UhiBGK``]VfUfmL

A i bXUmž'>YfYa m''; `fcaVgU[`Y fc5` e'Sf[a` efgV[We, fZVad[We S`V Sbb'[USf[a` ež: ci fh\ 'YX]h]cb"ž'C | ZcfX'. HUmcf'/ : fUbW]qž'&\$%" "f9Vcc_'Uj U]`UV'Y'Uh'I BGK '`]VfUfmŁ

 $\label{eq:condition} $$Dc``UfXž8Uj]X/7 \setminus Ub\check{z}G]b!kU]"''3`W'UkU'abSWW[SaXfdS`e'Sf[a`,5Z[`WeW\Z7`Y'[eZ\Z5Z[`WeW\Z9]'''3) W'UkU'abSWW[SaXfdS`e'Sf[a`,5Z[`WeW\Z9]'''] $$ dUdYfVUW_YX"z'<cb['?cb[..7\]bYgY'Ib]jYfg]mDfYggž&$$%"$

FcV]bgcbž8ci[`Ug"'4WUa_['YSfdS`e'Sfad,S`['fdaVgUf[a` fa fZWfZWadk,S`V bdSUf[UWaXfdS`e'Sf[a`ž" fXYX"ž'A]'hcb'DUf_ž'5V]b[Xcbž'Clcb/BYk 'Wcf_'.Fci hYX[Yž'&\$\%":f9Vcc_'Uj U]`UV`Y'Uhl BGK ``]VfUfmŁ

 $7 \ Y b z < cb[k Y] z : S ` K[Y XS ` k[Y UZg ' 9ggYbh] U ` 'hf Ubg` Uh] cb 'Zf ca ' 7 \] b Y g Y `] b hc '9 b[`] g \ z \\ G \ Ub[\ U] : G \ Ub[\ U] k U] ' mi ' ' Y Uc' mi ' W i ' V Ub' g \ Y \\ z : ` z :$

>ci fbU`q.

? WfS, Fob" e'Sfadei <agd S? WfS, Fob" e'Sfadei <agd S^

FSdYWf,; fWd Sf[a S^agd S^aXFdS e/Sf[a EfgV[We

5Z[WeWF dS e Sface < agd S^

7 ci fgY 9j U'i Uhjcb UbX 8 Yj Y`cda Ybh

H\]g'Wci fgY'k]``'VY'Zcfa U``mYj U`i UhYX'h\fci [\'A m9I dYf]YbWY"

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

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

_Zmci YbWci bhYf'U'dfcV`Ya 'k \Yb'UhYa dhJb['hc'gi Va]hmci f'Ugg][ba Ybhh\fci [\ 'Hi fb]hJbž'd`YUgY
hY`Yd\cbY'9| hYfbU``Gi ddcfhcb'-',) '' ' ' %cf'Ya U]``h\Ya 'cb'Y! hYfbU`hY`hgi ddcfh4 i bgk "YXi "Ui '"'Gi ddcfh
\ci fg'UfY', .\$\$Ua '-'%\$.\$\$da 'cb'k YY_XUmg'UbX'-.\$\$Ua '-') .\$\$da 'cb'k YY_YbXg'fl *) 'XUmg'U'mYUft'' =Zmci
UfY'i bUV`Y'hc'gi Va]hmci f'Ugg][ba YbhXi Y'hc'U'ZUi 'hk]h\ 'Hi fb]hJb'mci 'a Um'Udd'mZcf'Ub'Y! hYbg]cbžVi hmci
a i ghfYhU]b'mci f'hJW_Yhbi a VYf'Zfca '9! hYfbU`'Gi ddcfhfU'cb['k]h\ 'Ubmch\Yf'fY`Yj UbhXcW a Ybhgt'hc
]bWi XY'Ug'Yj]XYbW' 'hc'gi ddcfhmci f'Y! hYbg]cb'Udd`]WUhJcb'' =Zmci 'Ya U]`'9! hYfbU`'Gi ddcfhmci 'k]``

5 WUXYa | W < cbYghmUbX D`U[| Uf]ga

D`U[]Uf]ga i]gii g]b[ih\Yik cfXgicfi]XYUgicZch\YfgiUbXidfYgYbh]b[ih\Ya iUgimci fick b"i±iWUbihU_Yia Ubm Zcfa qžZfca iXYi]VYfUhYiW\YUh|b[ihciUVW]XYbhU`mWcdm]b[iZfca iUiqci fWYik]h\ci hiUW_bck iYX[Ya Ybh'i

IBGK '[fci dg'd'U[]Uf]ga ']bhc'h\Y'Zc``ck]b['WUhY[cf]Yg.

7 cdm]b[.'i g]b['h\Y'gUa Y'cf'j Yfmg]a]`Uf'k cfXg'hc'h\Y'cf][]bU`hYl h'cf']XYU'k]h\ci h'UW_bck `YX[]b['h\Y gci fW'cf'i g]b['ei chUh]cb'a Uf_g"'H\]g'U`gc'Udd`]Yg'hc']a U[Ygž'Ufh'UbX'XYg][b'dfcYWhgž'Ug'k Y``'Ug dfYgYbhUh]cbg'k\YfY'gca YcbY'dfYgYbhg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci h'WfYX]h'

⇒ Uddfcdf]UhY 'dUfUd\fUg]b[...7\Ub[]b['U'ZYk 'k cfXg'UbX'd\fUgYg'k \]'Y 'a cghmfYhJ]b]b['h\Y'cf][]bU` ghfi Wh fY 'UbX#cf'dfc[fYgg]cb'cZ]XYUg'cZh\Y'cf][]bU'žUbX']bZcfa Uh]cb'k]h\ci hUW_bck `YX[Ya Ybh'H\]g'U`gc Udd`]Yg']b'dfYgYbhUh]cbg'k \YfY'gca YcbY'dUfUd\fUgYg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci hWfYX]hUbX'hc d]YW]b['hc[Yh\Yf'ei chYg'UbX'dUfUd\fUgYg']bhc'U'bYk 'k \c`Yžk]h\ci hUddfcdf]UhY'fYZYfYbW]b["

7 c``i g]cb. 'k cf_]b['k]th 'cth Yfg'Vi hidUgg]b['cZZth Y '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_'thc'Ubcth Yf'ghi XYbh'VYZcfY'th Y'Xi Y'XUHYZcf'Zcf'th Y'di fdcgY'cZth Ya

- i bXYfglUbX`mci f`f][\hg`UbX`fYgdcbg]V]`]h]Yg`Ug`U`gh XYbh'Uhi BGK
- VY'Uk UfY'cZd`U[]Uf]ga ž'Wcdmf][\hzil BGK 'Gh XYbh7cXY'cZ7cbXi WhUbX'5WWdhUV`Y'I gY'cZ I BGK '= H'F Ygci fWfg'Dc`]Wh
- VY 'Uk UfY 'cZh\Y 'ghUbXUfXg 'cZVY\Uj]ci f'Yl dYWhYX 'cZYj YfmcbY ']b 'h\Y 'l BGK 'Wcaaib]hm
- `cWUHY 'gYfj]WYg'UbX `]bZcfa UH]cb'UVci hI BGK 'UbX'I BGK '@]VfUfm