

ARTS5506

5i glfU`]Ub'5Vcf][]bU`@Ub[i U[Yg

Gi a a Yf "# 8\$&%

7ci fgY[·]Cj Yfj]Yk

GhJZZ 7 cbhJWh 8 YhJ] `g

7cbj Ybcfg

B Ua Y	9a U]`		

7ci fgY 8YW] g

7 fYX]hDc]bhg *

Gi a a UfmcZh\Y'7ci fgY

5ggYgga Ybh

5ggYgga Ybh'HUg_g

5ggYgga YbhHJg_	K Y][\h	8i Y [.] 8UHY	Gh XYbh@YUfb]b[Ci hWca Ygʻ5ggYggYX
Ei]n'			

 $\label{thm:limit} \begin{tabular}{ll} Hi & fb \end{tabular} $$ Hi & fb \end{tabular} $$ h' \end{tabular} $$ Hi & fb \end{tabular} $$ h' \end{tab$

5 hm/b XUb WY F Yei]fYa Ybhg

7ci fgY'GWXYXi `Y

<u>J]Yk "WUgg"hja YHUV"Y</u>

H]a YHJV`Y

8UhY	Hmd Y	7 cbhYbh
AcXi`Y`%`@Ub[iU[Y YWc`c[]Yg	GYa]bUf	±btfcXi Whjcb'hc'h\Y'±bX][Ybci g``Ub[i U[Yg'cZ 5i gtfU`]U"'@Ub[i U[Y'YWc'c[]Yg']b'dfY!WcbtUWfUbX WcbhYa dcfUfmWcbhYl hg'fk]h\'U'gdYWJU``ZcW'g'cb GmXbYm`Ub[i U[Yfg\Ł"
Acxi Y.&.@Ub[iU[Y.UbX		

FYgci fWfg

DfYgWf]VYX F Ygci fWYg

D`YUgY`fYZYf`hc`A ccX`Y`Zcf`a cfY`XYhU]`g"

FYWca a YbXYX FYgci fWYg

D`YUgY`fYZYf`hc`A ccX`Y`Zcf`a cfY`XYhU]`g"

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

H\]g`]g`h\Y`Z]fghih]a Y`h\]g`Wci fgY`\Ug`VYYb`cZZYfYX"`=k]``kY`Wca Y`ZYYXVUW_`h\fci [\ci hih\Y`Wci fgY`gc`h\Uh]h\Wb`VY`]a dfcj YX`UbX`k]``fYei YghZcfa U``ZYYXVUW_`Zca `ghi XYbhg`Uhih\Y`YbX`cZh\Y`Wci fgY"`H\]g ZYYXVUW_`U`cb[`k]h\`fYgi `hg`cZh\Y`ghi XYbhZYYXVUW_`]b`a m9I dYf]Yb\W`fYdcfhg`k]``VY`i gYX`hc`]a dfcj Y`h\Y\\Vci fgY"

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

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

Image: Ybwei bhyfu'dfcv'ya k \yb'uhhya dhjb['hc'gi va]hmci f'Ugg][ba Ybhh\fci [\ 'Hi fb]h]bž'd'YUgY

Hy'Yd\cby'9| hy'fbu''Gi ddcfhcb'-',) '' ' ' %cf'Ya U]''h\Ya 'cb'Y! hy'fbu'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"'=Z'mci
UfY'i bUV'Y'hc'gi va]hmci f'Ugg][ba YbhXi Y'hc'U'ZJi 'hk]h\ 'Hi fb]h]b'mci 'a UmUdd'mZcf'Ub'Y! hy'bg]cbž'Vi hmci
a i ghfYhJ]b'mci f'h]W_Yhbi a VYf'Zfca '9! hy'fbU''Gi ddcfhfU'cb['k]h\ 'Ubmch\Yf'fy'Yj UbhXcW a Ybhgt'hc
]bWi XY'Ug'Yj]XYbW' 'hc'gi ddcfhmci f'Y! hy'bg]cb'Udd']WUh]cb"'=Zmci 'Ya U]''9! hy'fbU''Gi ddcfhmci 'k]'`
Ui hca Uh]WJ'`mfYW']j Y'U'h]W_Yhbi a VYfZ'Vi h]Zmci 'hY'Yd\cbY'mci 'k]``bYYX'hc'gdYW]Z]WJ'`mUg_'Zcf'cbY''
Hi fb]h]b'U'gc'dfcj]XYg'i dXUhy'g'cb'h\Y]f'gmghYa 'ghUh' g'cb'Hk]hyf''

; YbYfU`mž'UggYgga YbhiHug_g'a i ghVY'gi Va]hhYX'Y`YVWfcb]\WJ``mij]U'Y]h\Yf'Hi fb]h]b'cf'U'A ccX`Y Ugg][ba Ybh''=b']bgHJb\W'g'k \YfY'h\]g']g'bchdcgg]V`Yž']hk]```VY'gHJhYX'cb'mci f'\\circ i fgY'g'A ccX`Y'g]hY'k]h\U`hYfbUh]j Y'gi Va]gg]cb'XYHJ]`g"

cfi]bZcfa Uhjcbicbi\ckihcigi Va]hUgg][ba Ybhgicbi]bYij]UiA ccXiY.i\hdg.#gh XYbhi bgk "YXi "Ui #\ck! gi Va]hUgg][ba Ybha ccXiY

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=hWJbihU_Yia Ubm Zcfa gžZfca iXYi]VYfUhYiWXYUh]b[ihciUWW]XYbhU`mWcdm]b[iZfca iUigci fWYik]h\ci hiUW_bck iYX[Ya Ybh'

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

- i bXYfgfUbX mci f'f][\hg'UbX'fYgdcbg]V]`]hJYg'Ug'U'gh XYbhUhl BGK
- VY`Uk UfY`cZd`U[]Uf]ga ž`Wcdmf][\hz'l BGK `Gh XYbh7cXY`cZ7cbXi WhUbX`5VWWdhUV`Y`l gY`cZ I BGK `=\forall H`F Ygci f\W\g`Dc`]\m\m
- VY 'Uk UfY 'cZh\Y 'ghUbXUfXg 'cZVY\Uj]ci f'Yl dYWYX 'cZYj YfmcbY ']b 'h\Y 'l BGK 'Wca a i b]hm
- `cWUHY 'gYfj]WYg'UbX ']bZcfa UH]cb'UVci hI 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 bXYfgHJbX]b['cZU``h\YfY`UhYX'UgdYWng'cZ9@+69'k]``\Y`d'mci 'a U_Y'h\Y'a cghicZmci f'ghi X]Yg'UhI BGK "'\\hd.##qi VYWfi |XYg"`]VfUfm'i bqk "YXi "Ui #\`]qY#JVci hY`]qY

5 WUXYa]W + DZcfa Uhjcb

: cf'YggYbhJU`gh XYbh]bZcfa UhJcb fY`UhJb[hc.

- fYei Yghg Zcf Yl hYbg]cb/
- `UhY 'gi Va]gg]cbg '[i]XY`]bYg/
- fYj]Yk 'cZa Uf_g/
- I BGK < YU`h\ UbX GUZYmdc`]W[Yg/
- YI Ua]bUh]cb dfcW/Xi fYg/
- gdYWJU``Wcbg]XYfUHjcb']b'H\Y'Yj YbhcZ]``bYgg'cf'a]gUXj Ybh fY/
- gh XYbhYei]hmUbX'X]gUV]`]hm/
- UbX'ch\Yf'YggYbhJU`'UWUXYa]W]bZcfa UhJcbž'gYY