

ARTS2904

8 fYggYX'hc'?]``.'8 fYgg'UbX'=XYbh]hm']b'<]ghcfm

HYfa 'Hk c''#'&\$&%

7ci fgY'Cj Yfj]Yk

GHJZ7cbHJWh8YHJ]`g

7cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`] m	@cWUhjcb	D\cbY
A]bU'FcWyg	a "fcVWg4 i bgk "YXi "Ui	D`YUgY`WcbHJWhij]U	A cfj Yb 6fck b	-',)&'(,
		Ya U]`	') -	

Hi hcfg

B Ua Y	9a U]`	5j U]`UV]`] m	@cWJhjcb	D\cbY
>Ua YgʻDUi ``	<u> </u>	5 7 3	A cfj Yb 6fck b &‱	

GWXcc`7cbHJWhi±bZcfa Uh]cb

GWkcc``cZ<iaUb]h]Yg'UbX'@Ub[iU[Yg

@c\\U|rankingcb. `G\\\cc``C\Z|\\Y\z`A\cfj\Yb`6fck\b`6i\]`\X]b[\z'@\j\Y``&z`&),

CdYb]b['< ci fg. 'A cbXUm! ': f]XUmž'- Ua '!') da

D\cbY.'Ž*%'&'-',)'%*,%

: UI . Ž*%'&'-',) ', +\$)

9a U]`. '<u>\U`4 i bgk "YXi "Ui</u>

7ci fgY 8YHJ] g

7 fYX]hDc]bhg**

Gi a a UfmcZh\Y 7ci fgY

±0.8 fYggYX'hc'?]`žmci 'k]``Yl d`cfY'h\Y``]b_g'VYlk YYb'XfYgg'UbX'[YbXYfYX']XYbh]h]Yg'i g]b['U'bi a VYf'cZ WUgY'gh X]Yg'Zca '9i fcdYž5g]Už5i ghfU`]U'UbX'h\Y'5a Yf]WUg'cj Yf'h\Y``Ugh'Zci f'\i bXfYX'mYUfg'''H\]g Wci fgY'k]```ZcW g'cb'h\Y'a Ubm'a YUb]b[g'cZXfYgg'Zca 'XU]`mUhn]fYžhc'bUh]cbU``XfYgg'UbX'i b]Zcfa gžhc'\][\ZUg\]cb'UWfcgg'U'k]XY'[Ua i hcZW'hi fYg''K Y'k]``i gY'd\chc[fUd\gždU]bh]b[g'UbX'fYUX]b[g'hc'Wcj Yf'hcd]Wg

5ggYgga Ybh

 $D`YUgY`WXYW\underline{\ '}hXY`A\ ccX`Y`g]hY`Zcf'hXY`Z]`Yg`cb.$

%"Hi hcf]U``fYUX]b[g`UbX`ei Ygh]cbg`Zcf`X]gW gg]cb`]bWl X]b['h\Y`ei Ygh]cbg`Zcf`h\Y`fYgdcbgYg`hc`fYUX]b[g UggYgga Ybh

&":]`Y`cb`GYa]bUf!!`h\]g`]g`h\Y`Z]`Y`h\Uh``Yhg`mci`_bck`h\Y`fYUX]b[`fYei]fYX`Zcf`YUW\`gYa]bUf`UbX`h\YeiYgh]cbg`Zcf`X]gWigg]cb"`K\]`Y`bc`UggYggaYbh`]g`XiY`Zcf`h\Y`gYa]bUfgž`h\Y`fYUX]b[`UbX`X]gWigg]cb`k]``VY`]b`h\Y`WUgg`hYgh'

g]a]`Uf]hmifYdcfhg"

5ggYgga Ybh& ±bX]j]Xi U`Yl YfWJgY

GHJfh:XUhY. \$\%\\$*\#\\$\\$\\\$(.\\$\\$`DA

8 YW] g.

Gh XYbhg WkccgY 'U'di V`]WZ[i fY'fY"["ždfYg]XYbhždf]a Y'a]b]ghYfž'a cbUfWk!UbX'UggYa V'Y'd\chc[fUd\g Zfca 'bYk gdUdYfgž'a U[Un]bYg'UbX'h\Y'k YVž'UbX'UbU`mY'h\Y]f'gY`ZfYdfYgYbhUh]cb']b'h\Y]f'XfYggž XYdcfha YbhUbX'Wbgi a dh]cb'dfUW]WYg": YYXVUW_']g'Vm]bX]j]Xi U``Wa a Ybhg'[]j Yb'cb'h\Y'XUmcZh\Y dfYgYbhUh]cb'Ug'k Y``'Ug'k f]hhYb'Wa a Ybhg'cb'h\Y'V]V`]c[fUd\mgi Va]hhYX'ffYh fbYX'h\Y'Zc``ck]b['k YY_!"

5XX]h]cbU`XYhJ]`g.

FYZYfircih\YiYWi fYicbiUbUimg]b[ih\Yid\chc[fUd\iZcfi\ckirciXcih\]g"''H\YfYi]g'U'[fcid'YlYfW]gYi]bik YY_
'Xif]b[ih\YigYa]bUfik\YfYighiXYbhg''dfUW]WY'UbUimg]b[id\chc[fUd\g"

Ghi XYbhg`\Uj Y`hc`gi Va]h`U`*\$\$`k cfX`hfUbgWf]dhcZh\Y]f`UbU`mg]g`Ug`k Y```Ug`U`cbY`dU[Y`UbbchUhYX V]V`]c[fUd\mid d`cUXYX`h\fci [\`Hi fb]h]b"'H\Y`UbbchUhYX`V]V`]c[fUd\mid gha YUbg`ghi XYbhg`k f]hY`U gYbhYbW'cf`hk c`UZhYf`YUW\`fYZYfYbW'Wbgi `hYX`hc``Yhi g`_bck `\ck 'h\Y`gci fW'\Y`dYX`h\Ya ']b`h\Y]f UbU`mg]g"'Mci 'g\ci `X`Ug`a i W\`Ug`dcgg]V`Y`i gY`gW\c`Uf`mk cf_`cb`mci f`dYfgcb`f]Y`Wbgi `hV]c[fUd\]Yg`]Z dcgg]V`Y`cf`\]ghcfmhYl h\cc_gŁ`Ug`k Y```Ug`a UhYf]U``cb`h\Y`dc`]h\WJ``WbhYl hcZh\Y`h]a Y"`±b`gca Y`WUgYg gW\c`Ufg\]d`cb`Wbghfi Wf]cbg`cZ]XYU``ZYa]b]b]h]Yg#a UgW``]b]h]Yg#[YbXYf`cZh\Y`dUfh]W``Uf`Wci bhfm#W``hi fY a UmU`gc`VY`j Yfm]a dcffUbh'

5ggYgga Ybh' . F YgdcbgY hc fYUX]b[g

GhUfh'XUhY. \$\%\\$*#&\$&\%\\$).\$\$ DA

8 YHJ]`q.

Ghi XYbhgʻgi Va]hʻUʻfYgdcbgYʻfWU"') \$\$!*\$\$ʻk cfXgŁhcʻgYhei Ygh]cbgʻcbʻUʻk YY_`mfYUX]b['VYZcfY'cbY hi hcf]U`": YYXVUW_`]gʻj]Uʻ]bX]j]Xi U``Wca a YbhgʻUbX`]b!WUggʻX]gW gg]cb"

5XX]h]cbU`XYhJ]`g.

GYY'h\Y'ZjY'cb'Hi hcf]U``fYUX]b[g'UbX'ei Ygh]cbg'Zcf'X]gW gg]cb'f]b'h\Y'A ccX`Y'g]hYŁ'Zcf'k YY_'' ifh\Y'Ncch gi]hZ'Zcf'h\Y'ei Ygh]cbg'mci ibYYX'hc'Ubgk Yf'Zcf'h\]g'UggYgga Ybh'

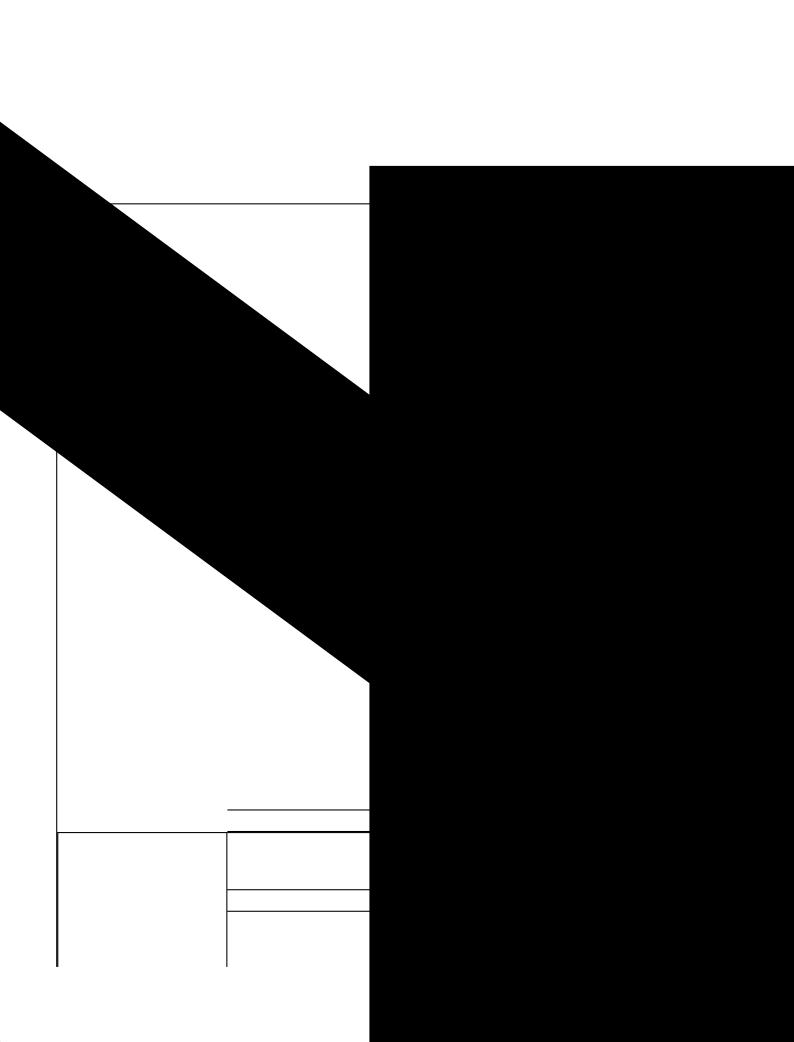
Hi fb]hjb gYhjb[. H\]g Ugg][ba Ybh]g gi Va]hYX h\fci [\ Hi fb]hjb UbX gh XYbhg WUb gYY Hi fb]hjb g]a]`Uf]hm

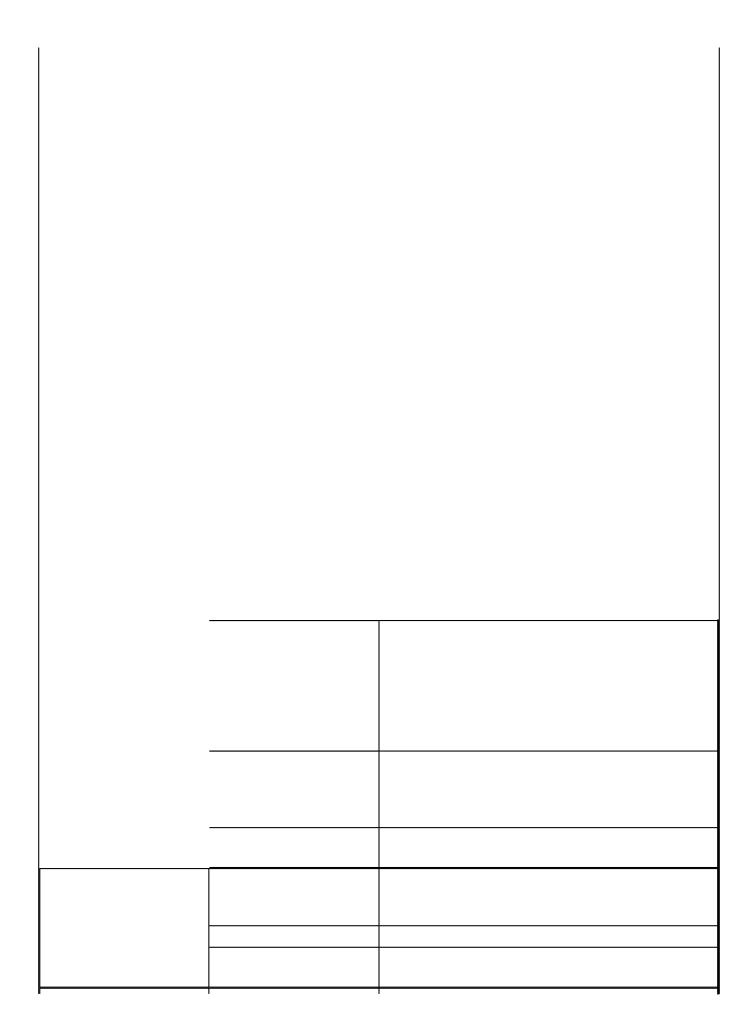
fYdcfhg"

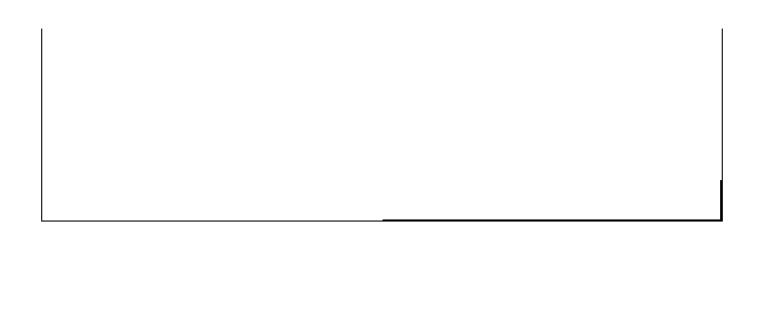
5ggYgga Ybh(. FYgYUfW. YggUm

GHJfh'XUhY. *\$%#\$*#&\$&%*\$(.\$\$*DA

8YHJ]`g.







FYgci fW/g

DfYgWf]VYX F Ygci fWfg

7 ci fgY F YUX]b[g"F YUX]b[g'Zcf'h\Y'h hcf]U`g'WUb'VY'UWWYggYX'h\fci [\'h\Y'A ccX`Y'G]hY'i bXYf'h\Y @Y[Ubhc'[fYYb'`]b_'Ybh]hYX.F Yei]fYX'F YUX]b[g'Zcf'h\Y'7 ci fgY"

FYWca a YbXYX FYgci fW/g

FYWca a YbXYX HYI h "A]bU F cWrg UbX @ci]gY 9 Xk UfXg flYXg"\z Z

FZWBa [f[Ue aX6 dNee [3e[SSV fZW3_Wd[USe f6f][\hcb. "Gi ggYI 5WUXYa]WDfYggž&\$\$+Ł"

Gi [[YghYXFYZYfYbWYg"``>ci fbU`g.``

8SeZ[a` FZWack

 $FWf[W] 3 < agd S^aX5 afZ SV 5gfgdW$

; $fWd Sf[a S^{a}d S^{a}X8SeZ[a EfgV]We$

>gj gdk, : [efadkł 5 g/fgdW 5 a` eg_ bf[a`

HWefa\ FZW<agd S^aXESdfadS^? SffWde

 $= fYWca \ a \ YbXii \ g]b[\ 'h\ YgY'ci \ fbU'g'h\ Uh'h\ Yi']VfUfm\ c`Xg']b'Y`YWfcb]WZcfa "``Mci 'k]```Z]bX``chg'cZfYUX]b[\ g mci 'Wci `X'a]bY`Zcf'mci f'YggUmg''``GYY'U`gc'h\ Y'V]V`]c[fUd\ mdfcj]XYX']b'h\ Y'YggUm`]gh''$

K YVg]hYg

 $= fYWca \ a \ YbX`WXYW_]b[\ '6`cca \ gVi \ fmdfYgg'`XfYgg`UbX`ZJg\]cb`gYf]Yg''``H\Ymdi \ V`]g\YX`a \ cghcZh\Y`Vcc_g \ cb`XfYgg`fgc`]h]g`WU``YX`h\Y`XfYgg`dfYgg\!''$

7 ci fgY 9j U'i Uh]cb UbX 8 Yj Y'cda Ybh

7 ci fgYgʻUfYʻdYf]cX]WU`mfYj]Yk YXʻUbXʻghi XYbhgʻʻZYXVUW_`]gʻi gYXʻhcʻ]a dfcj Yʻh\Ya ":: YYXVUW_`]g [Uh\YfYX`i g]b['j Uf]ci gʻa YUbgʻ]bWi X]b['I BGK 'gʻa m9I dYf]YbWY"'HYUW\]b['9j U`i Uh]cbgʻWcbXi WYX`]b &\$%%gi [[YghYX`Uʻg`][\hXYXi Wh]cbʻ]bʻh\Yʻbi a VYfʻcZfYgdcbgYgʻhcʻhi hcf]U``ei Ygh]cbg"'=fYXi WYXʻh\Ya 'Zfca

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]bz'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]cbz'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 Ybhgthc
]bWi XY'Ug'Yj]XYbW' hc'gi ddcfhmci f'Y! hy'bg]cb'Udd']\WJh]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'gdY\WZ]\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.