

I G!K]fhgWX UZh gWX fi a dZh. K UgʻVYXYi hYh XUgʻZØfʻi bgYfYʻNi _i bZh3

8 Yf 'HU[Yggd]Y[Y`'VYf]W hYh'ØVYf 'X]Y 'I G! K]fhgW UZhgYbhk]W_`i b[']a 'YfghYb'E i UfhU`'&\$&' ž']b_`i g]j Y Hfi a dg'Nc``dc`]h]_'i bX'?cbgi a Ui g[UVYb"



I G5 != "YfghYb"Ei UfhU" &\$&' "UbU'mg]Yfh'X]Y I G!K]fhgW\UZh'Y]bYb Y]W\hYb"F\@W_[Ub["jcb"Ubbi U']g]Yfh'\$\frac{2}{3}\DfcnYbh\frac{2}{3}\k Ug'X]Y \nk Y]hY GW\Ahni b["XYg" < UbXY\ga]b]ghYf]i a g'XUfghY\h"n''\b' \ni jcf'k i fXY'Y]b F\@W_[Ub["jcb"\\$\frac{2}{3}\DfcnYbh'\dfc[bcgh]n]Yfh''\\$\Ta\Y]bYa "JYf["Y]W\ni a "jcf\Yf[Y\YbXYb"j]YfhYb"Ei UfhU\\&\&\frac{2}{3}\Frac{2}{3}\DfcnYbh'[Yk UW\\gYb"k Uf\frac{2}{3}\nY][h\g]\frac{2}{3}\Frac{2}\Frac{2}{3}\Frac{2}\Frac{2}{3}\Frac{2}{3}\Frac{2}{3}\Frac{2}{3}\Frac{2}{3}\Frac{2}{3

8]Y'I G!BchYbVUb_': YXYfU``FYgYfj Y'Ài » YfhY'g]W\ 'ni f'G]hi Uh]cb i bX'Yf_`ÀfhYžXUgg'hfchm'XYg'FØW_[Ub[g'_Y]bY'Yf_YbbVUfY 5V_Ø\`i b['XYf'K]fhgW\UZh'ZYghni ghY``Yb'gY]"'\dot\]\fYa?cb'\i b_hi fVYf]W\ h' 6Y][Y'6cc_ 'j Yfk]Yg'X]Y': YX'Ui Z'gc`]XY K UW\\ghi a ghYbXYbnYb"'8]Y'\dot\a dcfhY'gh]Y[Yb']a 'YfghYb'Ei UfhU` i a 'VYY]bXfi W_YbXY'(&ž*'DfcnYbhž'k Ug'Yf\YV`]W\ 'ni a 'bY[Uh]j Yb K]fhg\\UZhgk U\\\ghi a 'VY]hfi ["'8Yf'5i » Yb\UbXY``k]f_hY'g]\\\bU\Yni 'Z\ØbZ'DfcnYbhdi b_hY'VY`UghYbX'Ui Z'XUg'6\dot\Diu g"'8]Yg']gh VYgcbXYfg'VYa Yf_Ybgk Yfhž'XU'X]Y'df]j UhYb'?cbgi a Ui g[UVYb i a 'Ubbi U`]g]Yfh'\%\&\DfcnYbhgh]Y[Yb' 'XYf'b]YXf][ghY'5bgh]Y['gY]h A]hhY'\&\&' "

5 i gV`]W_ Ui Z'X]Y Ua Yf]_Ub]gWXY K]fhgWXUZh

 $8] Y T G!K] fhgWX UZh` Uh`]b` XYb``YhnhYb`$J \fYb`Y]b \\ \emptyset VYfXi fWX gWX b]hh`]WX Yg`K UWX ghi a `j YfnY]WX bYhž`YXcWX`VYZ]bXYh g]Y`g]WX`k Y]hYf\]b`\]bhYf`XYb`; &$!GWX k Y``Yb`ÀbXYfb`k]Y`$X]Yb i bX`7\]bU"`@Ui h`GhUh]ghU`\UVYb`ØVYf`*$`DfcnYbh`XYf`6YZfU[hYb gY]h`9bXY`&$&%`dcg]h]j Y`9fk Ufhi b[Yb`\]bg]WX h`]WX`XYf k]fhgWX UZh`]WXYb`9bhk]W_`i b["`8]YgY`dcg]h]j Yb`Gh]a a Yb`k YfXYb Xi fWX`Y]bY`[YgWX AhnhY`$Z`Uh]cbgfUhY`j cb`&ž(`DfcnYbh`]a`$J \f &$&(`i bX`Xi fWX`g][b]Z]_UbhY`ghUUh`]WXY`$DZfUghfi _hi f]b]h]Uh]j Yb i bhYfghØhnhž`X]Y`X]Y`GhUUhgUi g[UVYb`Ub_i fVY`b'': Øf`XUg`$J \f &$&(`k]fX`ni XYa`Y]b`K]fhgWX UZhgk UWXghi a `j cb`Yhk U`&ž,`DfcnYbh [YgWX Ahnh'$

A]h'Y]bYa '6fi hhc]b`UbXgdfcXi _h'j cb'[YgW\Àhnh'&- ž&'6]``]cbYb'l G!
8 c``Uf']a '\$\\f'&\$&('V`Y]Vh'X]Y'l G!K]fhgW\UZh'X]Y'[fÒ>hY'XYf'K Y`h''
< Ui g\U`hgXYZ]n]hY'i bX'X]Y'GhUUhgj YfgW\i `Xi b['g]bX''YXcW\'Ui W\ h\Ya Uh]g]Yfh'k cfXYb.'8]YgY'k YfXYb'ZØf'XUg'\$\\f'&\$&('Ui Z'Yhk U'& 6]``]cbYb'l G!8c``Uf'VYn]Y\i b[gk Y]gY''' \dot{z} ('6]``]cbYb'l G!8c``Uf [YgW\Àhnhž'k Ug'%&&'DfcnYbh'XYg'6\D'Ybhgdf]W\h''8]Y
9fk YfVgei chY'_ObbhY'g]W\'&\$&('Ui Z'* %\zeta-'DfcnYbh'VY`Ui ZYbz'a]h Y]bYf'5fVY]hg`cgYbei chY'j cb'[YgW\ÀhnhYb'(\zeta')DfcnYbh'

6 = D i b X K] fhg W U Zhggh fi _ hi f

 $8\,Y\,f^{\,\prime}[\,f\,\grave{O}\!\!>\,hY^{\,\prime}G\,Y_hc\,f^{\,\prime}X\,Y\,f^{\,\prime}I\,G\,!\,K\,\,]fhg\,W\!\lambda\,\,U\,Z\!h^{\,\prime}]gh^{\,\prime}X\,Y\,f$

8]Ybgh`Y]ghi b[ggY_hcfž`XYf`+*ž(`DfcnYbh`XYg`6 Dg`Ui ga UW\hž
[YZc`[hij ca 'j YfUfVY]hYbXYb'; Yk YfVY'i bX`XYf`@UbXk]fhgW\UZh`"
8]YgY`k]fhgW\UZh`]W\Y`8]j Yfg]Z]_Uh]cb`ghØhnh`X]Y`fcVi ghYb`@Y]ghi b[XYf`I G!K]fhgW\UZhž`k À\fYbX`X]Y`df]j UhYb`<Ui g\U`hY`ZØf`Y]bYbYbhgW\Y]XYbXYb`HY]``XYf`?cbgi a Ui g[UVYb'j YfUbhk cfh`]W\g]bX"
Dg[YgUa h`gW\`U[Yb`X]Y`JYfVfUi W\YfUi g[UVYbž`X]Y`&\$&&`[i h&\$ž&`6]``]cbYb`I G!8c``Uf`VYhfi [YbžY]bY`XYi h`]W\Y

Ni gUa a YbZUggYbX'`Àggh'g]W\ 'gU[Ybž'XUgg'hfchn'XYf'XYfnY]h][Yb < YfUi gZcfXYfi b[Ybž'XYf'5i gV`]W_'Ui Z'X]Y'I G!K]fhgW\UZh']b 5bVYhfUW\h'XYf'9f\c`i b[gXmbUa]_'i bX'XYf'dcg]h]j Yb 9fk Ufhi b[Yb'XYf'6Øf[Yf'j]Y`j YfgdfYW\YbX'V`Y]Vh''5i W\'X]Y'ghUf_Y GhY``i b[']a ']bhYfbUh]cbU`Yb' < UbXY`ž']bgVYgcbXYfY'X]Y'6Yn]Y\i b[ni 'A YI]_c'U`g'k]W\h][ghYa' < UbXY`gdUfhbYf']a '; ØhYf\UbXY`ž'nY][h X]Y'FYg]`]Ybn'XYf'I G!K]fhgW\UZh']a '[`cVU`Yb'?cbhYI h''

HU[Yggd]Y[Y`VYf]W\hYhz'XUgg'

GhUh]ghU bYbbh

8 YghUh]g \YVh \Yfj cf

8 Y hU]`g	
J c f ZU``	K]fhgWX UZh
Cfh	I G5
Ei Y``Yb	k k k "hU[Yggd]Y[Y`"XYXY"ghUh]ghU"Wcak k k "XYghUh]g"XY

6 Ygi W Yb 'G]Y 'i bg 'Ui Z 'b!U["bYh