

9]bgÀhnY'XifWX'- %%.'9]b'l bZU``cdZYf k UfhYh'j Yf[YV`]WX'UiZ'<]`ZY

A chcffUXZU\fYf'k UfhYh'ØVYf'Y]bY'Ghi bXY'Ui Z'<]`ZY'bUW\l bZU``/'df]j UhY'5a Vi `Ubn'fYU[]Yfh'Yfgh'bUW\'GcW]U`!A YX]U! A Y`Xi b["

9]b A chcffUXi bZU```\Uh']b Y]bYa 'VY`YVhYb'? fYi ni b[gVYfY]W\']b 7cU\i]`U ZØf XfUgh]gW\Y GW\`U[nY]`Yb'[Ygcf[hž'U`g'Y]b'' &! 'À\f][Yf A Ubb a Y\f'U`g'Y]bY'Ghi bXY'`Ub['Ui Z'XYa :: U\fnYi [XUW\'Y]bYg UbXYfYb'5i hcg'Ui Z'<]`ZY'k UfhYhY"'8 Ug'VYgcf[b]gYffY[YbXY 9fY][b]g'Ybh\Ø``hY'b]W\h'bi f'X]Y'[fc» Yb'@W_Yb']a 'BchZU``gmghYa ž gcbXYfb'VfUW\hY'Ui W\'X]Y'DfcV`Ya Uh]_'i bni fY]W\YbXYf FYU_h]cbYb'XYf'Bchfi Zbi a a Yf'- %%'Ubq'@|W\h"

8 Yf J cfZU``YfY][bYhY g]W ia Yhk U'%\$.' \$1 \f'Ua '?fYi ni b[gdi b_h'A Y`W\cf'A Önei]n'i bX'A Uf]Ubc
A UhUa cfcg"8 Yf A chcffUXZU\fYfž i 1/2b '7 Ufa cbUž [Yf]Yh']b
Y]bYb'Ni gUa a Ybghc» ia]h'Y]bYa 'B]ggUb'Hgi fi ž'XYf'j cb'
: UV]c`U'A Uf]VY`ž'Y]bYf'', !'À\f][Yb': fUi ž'[YZU\fYb'k i fXY"'G]Y
k Uf'i bhYfk Y[g'F]W\hi b['A Uf]Ubc'5VUgc`c'i bX'\UhhY'Ub'XYf
?fYi ni b['X]Y'J cfZU\fh'XYg'i bVYgW\]`XYfhYb'A chcffUXg'b]W\h

Bchfi Zi bXi bYfk UfhYhY K UfhYnY]h

CVk c\``i a [Y\YbX'XYf'Bchfi Z'- %%'_cbhU_h]Yfh'k i fXYž VYghÀh][hYb'5i [YbnYi [Yb'i bX'7Ufa cbUg'6fi XYfž'XUgg'XYb 5bfi ZYfb'[YgU[h'k i fXYž'Yg'gY]'_Y]b'BchZU``Y]bgUhn'bÒh]["' 8]Y A]bi hYb'j Yf[]b[Yb'i bX'X]Y'Ubk YgYbXYb'6YUa hYb'Xi fZhYb']\b Ui g'G]WXYf\Y]hg[fØbXYb'k Y[Yb'a Ò[`]WXYf'gWk YfYf'J Yf`Yhni b[Ybb]Wkh'VYk Y[Yb ž'VYf]WXhYhYb'X]Y'NYi [Yb"

j 1⁄2bž′XYf′Xi fWX ′XYb′5i ZdfU```gWXk YfY′JYf`Yhni b[Yb′Yf`]hhž

XUfi bhYfY]bYj Yfa i hYhY: fU_hi f'Ua ``]b_Yb'6Y]bž'V`]YV k À\fYbX'XYf'[YgUa hYb'K UfhYnY]hj Yf`Yhni b[gVYX]b[h'Ui Z'XYa : U\fnYi [XUW\"'8]Y'5f]Yž'U`g'gW\`]Y»`]W\'Y]bY'df]j UhY'? fUb_Ybk U[YbWfYk 'j cb'9A Gž'Y]b'df]j UhYf'FYhhi b[gX]Ybghž'Ui Z XUg'I b[`ØW_'Ui Za Yf_gUa 'k i fXY'i bX'X]Y' \pm DCfa Uh]cbYb'ØVYf gcn]U`Y'A YX]Yb'Yf\]Y`hž'k Uf'hmd]gW\'ZØf'XUg'hfUi f][Y'6]`X'XYf BchZU``j Yfgcf[i b['j cf'Cfh'']

9fbYi hY'6YXYb_Yb'\]bg]Wh)WXYfG]WYfYJh

A Y\fYfY'DUggUbhYb'\cVYb'\Yfj cfž'XUgg'X]Yg'b]W\h'XUg'YfghY'A U`k Ufž'XUgg'Yg'Ua 'gY`VYb'Cfh'ni 'I bZ\`Yb'_Ua "'8]Y'<\Ai Zi b['XYf 9fY][b]ggY'Yfk YW_h'6YXYb_Yb'ØVYf'X]Y'JYf_Y\fgg]W\Yf\Y]h'i bX X]Y'Bchk YbX][_Y]h'k Y]hYfYf'A U» bU\a Yb']b'X]YgYf'; Y[YbX" DfcV`Ya Uh]gW\Y'9fZU\fi b[Yb'a]h'XYf'Bchfi Zbi a a Yf'- %%'k YfZYb Ui W\: fU[Yb'\@VYf'X]Y'U``[Ya Y]bY'FYU_h]cbgZ\\][_Y]h'XYf BchX]YbghY'Ui Z"

8 Yf'J cfZU``nY][h'XYi h`]W\ X]Y'J YfgÀi a b]ggYž'X]Y']b
B chZU``g]hi Uh]cbYb Yfbgh'[Ybca a Yb'k YfXYb'a ØggYb"'8]Y
j YfnÒ[YfhY'FYU_h]cb'Ui Z'XYb'Bchfi Z'i bX'X]Y'I bZÀ\][_Y]hž
fYW\hnY]h]['<]`ZY'ni '`Y]ghYbž'_ÒbbYb']a 'i b[Øbgh][ghYb': U```ZUhU`Y
: c`[Yb'\UVYb"'9g'k]fX'ni bY\a YbX'_`Ufž'XUgg'gck c\``5i hcZU\fYf
U`g'Ui W\'DUggUbhYb'Y]b'[fc» Yg'\DhYfYggY'XUfUb'\UVYbž'XUgg'X]Y
B chZU``gmghYa Y'YZZ]n]Ybh'i bX'gW\bY```UfVY]hYb"'9]b'I a XYb_Yb']b
XYf'FYU_h]cb'Ui Z'BchZÀ``Y'_ÒbbhY'b]W\h'bi f'Y]bYa 'Y]bnY`bYb
6YhfcZZYbYb'XUg'@YVYb'fYhhYbž'gcbXYfb'Ui W\'XUg'JYfhfUi Yb']b
XUg'[YgUa hY'FYhhi b[ggmghYa 'ghÀf_Yb"

8 Yf I b ZU``ž'XYf'g]W\']b'X]YgYf'VY`YVhYb'FY[]cb'UVgd]Y`hYž
j YfXYi h`]W\h'X]Y'Xf]b[YbXY'Bchk YbX][_Y]hž'YZZY_h]j Y'A U» bU\a Yb
ni f'I b ZU``j Yfa Y]Xi b['ni']a d`Ya Ybh]YfYb'i bX'i a [Y\YbX'Ui Z
Bchfi ZY'ni'fYU[]YfYb"8]Y'; YgW\]W\hY'j cb'\fracein' \fracein' \frac

< Ài Z][Y'DfcV`Ya Y'a]h'XYa 'Bchfi Z'- %%

a Yfik]YXYfihUi WXYbi6Yf]WXhYiØVYfiGWXk]Yf][_Y]hYbi]a
I a [Ub[ia]hiXYbiBchX]YbghYbiUi Zži]bgVYgcbXYfYi]bi6Yni [iUi Z
XYbiBchfi Zi- %%i]bij YfgWX]YXYbYbi@AbXYfb"i=bij]YiYbi: AiiYbi_Ubb
Ygini iJ YfnÒ[Yfi b[YbiVY] XYfi9]bgUhniY]hi b[i_ca a Yb"i=biXYbil G5
\UhiVY]gd]Yigk Y]gYiY]bYiGhi X]Yi[YnY][hžiXUggi]bighAXh]gWXYb

; YV]YhYb'Bchfi ZY'cZh'b]W\h'UX\Aei Uh'VYUfVY]hYh'k YfXYbz'k Ug'ni \Ab[YfYb'K UfhYnY]hYb'Z\Offa YX]n]b]gW\Y'<]\ZY'Z\O\fYb'_Ubb'''9]bY I bhYfgi W\i b['XYg' BUh]cbU\'5\WXYa mcZ'GW]YbW\g'\Uh'Yf[YVYbz'XUgg'nk]gW\Yb'\&\\$%+'i bX'\&\\$%-']b'Y]b][Yb'Gh\AXhYb'V]g'ni '\&\\$DfcnYbh'XYf'Bchfi ZY'b]W\h'ni 'Y]bYf'gcZcfh][Yb'FYU_h]cb'Z\O\fhYbz'k Ug'X]Y'BchZU\`j Yfgcf[i b['Yf\YV\]W\'VYY]bhf\AW\h][hY"

8]Y'Fc``Y'XYf'gcn]U`Yb'AYX]Yb']b'BchZÀ``Yb

± XYf`\Yi h][Yb`NY]h`gd]Y`Yb`gcn]U`Y`A YX]Yb`Y]bY`YbhgW\Y]XYbXYFc``Y`VY]`XYf`JYfVfY]hi b[jcb'± Zcfa Uh]cbYb"'± j]Y`Yb': À``Yb`\Uhg]W\[YnY][hž`XUgg`X]YgY`D`UhhZcfa Yb`gW\bY``Y`<]`ZY`]b`BchZÀ``YbV]YhYb'_ObbYb"K À\fYbX`X]Y`cZZ]n]Y``Y`Bchfi Zbi a a Yf']b_f]h]gW\Yb`G]hi Uh]cbYb`cZh'j YfgU[hž'_ObbYb`NYi [Yb`ØVYf`gcn]U`YAYX]Yb'± Zcfa Uh]cbYb`hY]`Ybž`X]Y`FYhhi b[gX]YbghY`a cV]`]q]YfYb"

a ; Y[YbgUhn XUni _Ubb X]Yg Ui W dfcV Ya Uh]gW gY]bž XU X]Y

Dzcfa Uh]cbYb b]W h]a a Yf ØVYfdfØzh cXYf _cffY_hg]bX" D X]YgYfG]hi Uh]cb k Uf Yg X]Y 5i Za Yf_gUa _Y]h XYf gcn]U Yb A YX]Ybž X]Y

Y]bY df]j UhY 5a Vi `Ubn Ui Z XYb I b ZU ``Ui Za Yf_gUa a UW hY i b X

gca]h Y]bY 9g_U`Uh]cb XYf B ch U[Y UV k Yb XYhY "8]Y 5V \ Àb[][_Y]h

j cb 'gcn]U Yb A YX]Yb ZØf B ch ZÀ ``Y VYXYi hYh Yxc W ž XUgg

A YbgW Yb a Ò[`]W Yfk Y]gY b]W h Ui Z X]Y VYk À\fhYb Ghfi _hi fYb

XYf B ch ZU ``j Yfgcf[i b['j YfhfUi Yb _ObbYb"

I bZU``ghUh]gh]_Yb'i bX G]WXYf\Y]hgj cfgWXf]ZhYb

9]b k Y]hYfYffYYYj UbhYfDi b_hg]bX X]Y [YgYhn`]WXYb JcfgWXf]ZhYb \]bg]WXh`]WX XYfBi hni b['j cb'GWXi hnUi gfØghi b["' \pm b'A YI]_c VYghY\hZØfA chcffUXZU\fYfX]Y JYfdZ]WXhi b[\pm Y]bYb'< Y`a 'ni hfU[Yb \pm i a 'XUg'F]g]_c'gWXk YfYf'?cdZ] Yf`Yhni b[Yb'ni 'fYXi n]YfYb" Hfchn'X]YgYfJcfgWXf]ZhYb'\U`hYb'g]WX'YXcWX'j]Y'Y': U\fYf'i bX 6Y]ZU\fYfb]WXh'XUfUb \pm k Ug'X]Y'JYf`Yhni b[gfUhYb'Yf\YV`]WX Yf\O\h"8]Y'5i Z_`Àfi b['ØVYf'X]YgY'G]WXYf\Y]hga U» bU\a Yb _ObbhY'XUni 'VY]hfU[Yb \pm X]Y'NU\`XYf'I bZÀ``Y'i bX'X]Y'XUfUi g fYgi `h]YfYbXYb'gWXk YfYb'JYf`Yhni b[Yb'ni 'j Yff]b[Yfb"

8 YhU]`g

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