

@]bn'Ua 'F \Y]b. '+\$!>Ä\ f][ Y'C dZYf'Y]bYg  
; Y`XVÖfgYbX]YVghU\`g

⊕'@]bn'Ua 'F \Y]b'k i fXY'Y]bYf'+\$!>Ä\ f][ Yb': fUi ']\fY  
; Y`XVÖfgY'[ Yghc\`Yb"<]bk Y]gY'ni a 'HÄhYf'b]a a h'X]Y'Dc`nY]  
Ybh[ Y[ Yb"

@]bn'Ua 'F \Y]b' ⊕'Y]bYf'fi \][ Yb'K c\ b[ Y[ YbX'YfY][ bYhY'g]W\ ]b  
XYf'B UW\h]j cb'GUa ghU[ 'Ui Z'GcbbhU[ 'Y]b'J cfZU`ž'XYf'X]Y  
5bk c\ bYf' ]b'5`Ufa VYfY]hgW\ UZh] YfgYhnh"; Y[ Yb'\$&.( \$'I \f  
a Y`XYhY'Y]bY'+\$!>Ä\ f][ Y': fUi 'Ui g'9fdY'ž'XUgg']\f'DcfhYa cbbU]Y  
Ui g']\fYf'K c\ bi b[ '[ Yghc\`Yb'k i fXY"8Yf'8]YVghU\`'[ YgW\ U\ ]b  
XYf'6Yf[ ghfU»Yž'i bX'X]Y'F Äi a `]W\ \_Y]hYb'k UfYb'c ZYbg]W\ h]W\  
b]W\ h'Ui gfY]W\ YbX'[ Yg]W\ Yfh"

K ]Y'Ui g'XYb'YfghYb'9fa ]h'i b[ Yb'XYf'Dc`nY]\`Yfj cf[ Y\hž  
[ Y'Ub[ hY'XYf'i bVY\_UbbhY'HÄhYf'Xi fW\ 'Y]bY'b]W\h]j YfgW\`cggYbY  
<Ui ghØf']b'X]Y'K c\ bi b[ 'XYf'Ä'hYfYb'8Ua Y" ⊕'XYf'?ØW\ Y  
Ybhk YbXYhY'Yf'XUg'DcfhYa cbbU]Yž'XUg'j YfgW\]YXYbY'6Ub\_\_UfhYb  
gck ]Y'Y]bY'\_Y]bY'A Yb[ Y'6Uf[ Y'X'Yb'h\]Y'h"8Ug': Y\`Yb'j cb  
GW\i hna U»bU\ a Ybž']bgVYgcbXYfY'XUg'J Yf'UggYb'XYf'<Ui ghØf'  
c\ bY'UVgW\`jY»Ybž'gd]Y'hY'Y]bY'YbhgW\Y]XYbXY'F c`Y'VY]'X]YgYa  
J cfZU`"

< ]bhYf[ fØbXY'i bX'G]W\ Yf\ Y]hgVYXYb\_Yb

8]Y'Dc`nY]'@]bn'\Uh'a ]h'Yfk Y]Y'X]Y'9fa ]h'i b[ Yb'Ui Z[ Ybca a Yb  
i bX'V]hYh'X]Y'^2 ZYbh]W\ \_Y]h'i a 'A ]h\]'ZY"'J cf'U`Ya '<]bk Y]gY'ØVYf  
j YfXÄW\h][ Y'DYfgcbYb'cXYf': U\fnYi [ Yž'X]Y'ni f'HUhnY]h]b'XYf  
I a [ YVi b[ '[ YgY\Yb'k i fXYbž'g]bX'j cb[ fc»Ya '⊕'hYfYggY"9g']gh  
k ]W\h][ ž'XUgg'gc`W\Y'J cfZÄ`Y'gW\ bY`Ui Z[ Y\_`Äfh'k YfXYbž'i a 'XYf  
; Ya Y]bgW\ UZh]Y]b'; YZØ`XYf'G]W\ Yf\ Y]h'ni fØW\_ni [ YVYb"

8]YgYf`JcfZU`k]fZh`Y]b`@]W`h`U`i`Z`X]Y`G]W`Y`f`Y]hgghUbXUfXg`]b  
K`c`b[`YV]YhYbž`]bgVYgcbXYfY`VY]`À`h`Y`f`Y`b`6`Ø`f[`Y`f`b`"`,`<`À`i`Z[`k`]fX  
X]Y`H`Ø`f`Y`]b`X`Y`f`B`U`W`h`U`i`g`];`Y`k`c`b`Y`]h`b`]W`h`U`V[`Y`g`W`c`gg`Y`b`ž`k`U`g  
X]Y`K`U`f`g`W`Y`]b`]W`\_`Y`]h`Y`]b`Y`g`9]b`V`f`i`W`g`Y`f`Ø`Y`b`\_`U`b`b`"  
G]W`Y`f`Y]hgZUW`Y`i`h`Y`Y`a`d`Z`Y`Y`b`ž`]a`a`Y`f`X`U`f`U`i`Z`n`i`U`W`h`Y`b`ž`X`U`g`g  
9]b[`À`b[`Y`g]W`Y`f`j`Y`f`g`W`c`gg`Y`b`g]b`X`ž`g`Y`V`g`h`k`Y`b`b`a`U`b`b`i`f`Z`Ø`f  
\_`i`f`n`Y`N`Y]h`X`U`g`<`U`i`g`j`Y`f`À`g`g`h`"9]b`Z`U`W`Y`A`U`»`b`U`a`Y`b`k`]Y`X]Y  
B`i`h`n`i`b[`j`c`b`G]W`Y`f`Y]hg]f]Y[`Y`b`c`X`Y`f`H`Ø`f`\_`Y`h`Y`b`\_`Ø`b`b`Y`b`Y`Y`Z`Y`b`ž  
i`b[`Y`V`Y`h`Y`b`Y`];`À`g`h`Y`Z`Y`f`b`n`i`U`h`Y`b`"

8]Y`D`c`n`Y]`k`Y]g`h`X`U`f`U`i`Z`Y]b`ž`X`U`g`g`X]Y`J`c`f`Z`À`Y`j`c`b`8]Y`V`g`h`À`Y`b`]b  
K`c`b[`YV]Y`h`Y`b`n`i`b`Y`a`Y`b`ž`V`Y`g`c`b`X`Y`f`g]b`X`Y`b`g`d`À`h`Y`b  
5`V`Y`b`X`g`h`i`b`X`Y`b`"G`c`W`X`Y`8]Y`V`g`h`À`Y`\_`Ø`b`b`Y`b`[`f`c`»`Y`b`Y`a`c`h]c`b`U`Y`b  
G`h`f`Y`g`g`V`Y]X`Y`b`6`Y`h`f`c`Z`Y`b`Y`b`j`Y`f`i`f`g`U`W`Y`b`i`b`X`X`U`g  
G]W`Y`f`Y]hg[`Y`Z`Ø`Y`]b`X`Y`f`i`a`[`Y`V`i`b[`i`b`h`Y`f[`f`U`V`Y`b`"8]Y`5`b`k`c`b`Y`f  
g]b`X`X`U`Y`f`U`i`Z[`Y`Z`c`f`X`Y`f`h`ž`U`i`Z`a`Y`f`\_`g`U`a`n`i`g`Y]b`i`b`X`Y`X`Y`U`i`Z`Z`À`][`Y  
6`Y`c`V`U`W`h`i`b[`i`a`[`Y`Y`b`X`X`Y`f`D`c`n`Y]n`i`a`Y`X`Y`b`"

- 9f`Ø`h`Y`K`U`W`g`U`a`\_`Y]h`]b`K`c`b[`Y[`Y`b`X`Y`b
- ?`i`f`n`Z`f]g`h[`i`a`g`Y`h`n`V`U`f`Y`G]W`Y`f`Y]hg]d`d`g
- B`c`h`f`i`Z`b`i`a`a`Y`f`i`b`X`<]b`k`Y]g`Y`n`i`f`A`Y`X`Y`d`Z]W`h`

8`U`g`D`c`f`h`Y`a`c`b`b`U]Y`ž`X`U`g`[`Y`g`h`c`Y`b`k`i`f`X`Y`ž`k`U`f`b]W`h`i`b`i`f`Y]b  
a`U`h`Y`f]Y`Y`f`J`Y`f`i`g`h`ž`g`c`b`X`Y`f`b`U`i`W`Y`]b`Y`a`c`h]c`b`U`V`Y`U`g`h`Y`b`X`Y`g  
9`f`Y][`b]g`Z`Ø`f`X]Y`V`Y`h`f`c`Z`Y`b`Y`i`f`U`i`"J`Y`f`i`g`h`À`b[`g`h`Y`i`b`X`X]Y`G`c`f[`Y`ž  
X`U`g`g`Y`a`U`b`X`]b`]f`N`i`U`i`g`Y`Y]b[`Y`X`f`i`b[`Y`b`]g`h`ž`\_`Ø`b`b`Y`b  
d`g`m`W`]g`W`Y`6`Y`U`g`h`i`b[`Y`b`Y`f`n`Y`i`[`Y`b`ž`X]Y`Ø`V`Y`f`X`Y`b`a`U`h`Y`f]Y`Y`b  
J`Y`f`i`g`h`Y]b`U`i`g[`Y`Y`b`"9`g`k`]f`X`Y`a`d`Z`c`Y`b`ž`U`i`W`d`g`m`W`c`c[`]g`W`Y  
l`b`h`Y`f`g`h`Ø`h`n`i`b[`]b`6`Y`h`f`U`W`h`n`i`n]Y`Y`b`ž`i`a`i`g`c`W`X`Y`9`f`Y`V`b]g`g`Y`n`i  
j`Y`f`U`f`V`Y]h`Y`b`"

## Dc`nY]`]W`Y`9`f`a`]h`h`i`b[`Y`b

8]Y`D`c`n`Y]`U`h`V`Y`f`Y]hg`Y`f`g`h`Y`A`U`»`b`U`a`Y`b`n`i`f`5`i`Z`\_`À`f`i`b[`X`Y`g  
:`U`Y`g`Y]b[`Y`Y]h`Y`h`8`U`n`i`n`À`h`X]Y`5`i`g`k`Y`f`h`i`b[`j`c`b`a`Ø[`]W`Y`b  
,`V`Y`f`k`U`W`i`b[`g`\_`U`a`Y`f`U`g]b`X`Y`f`i`a`[`Y`V`i`b[`g`c`k]Y`X]Y`6`Y`Z`f`U[`i`b[  
j`c`b`B`U`W`V`U`f`b`i`b`X`D`U`g`g`U`b`h`Y`b`"8]Y`<`c`Z`b`i`b[`Y`b`]Y[`Y`b`X`U`f`U`i`Z`z`a`]h  
[`i`h`Y`f`D`c`n`Y]U`f`V`Y]h`i`g`W`b`Y`@]W`h`]b`g`8`i`b`\_`Y`n`i`V`f]b[`Y`b`i`b`X`X`Y`b`"

HÀhYf'ni f'FYWYbgWUZh'ni 'n]Y\Yb" HÀhYf\]bk Y]gY'k YfXYb'ì bhYf  
XYf'HY'YZcbbi a a Yf'\$&\* ( (!- (' \$'YfVYhYb"

9g'nY][ h'g]W ž'XUgg'gc`WY'J cfZÀ`Y'b]W h'jgc`]Yfh'VYhfUW hYh  
k YfXYb'XØfZYb"'?f]a ]bU']hÀhgdfÀj Ybh]cb']gh'gck c\`Y]bY  
J YfUbhk cfhi b[ 'XYf'6Y\ØfXYb'U'g'Ui W'U`Yf'6Øf[ Yf"'>XY'DYfgcb  
]gh'Ui Z[ YZcfXYfhž'Ui Z'X]Y'Y][ YbY'G]WYf\Y]h'ì bX'X]Y' ]\fYf  
BUWVUfb'ni 'UW hYb'ì bX'ja 'Nk Y]ZY'gZU`X]Y'Dc`]nY]'ni  
]bZcfa ]YfYb"'9]bY' ]bZcfa ]YfhY'ì bX'Ui Za Yf\_gUa Y'; Ya Y]bXY'\_Ubb  
Y]bYb'[ fc»Yb'6Y]hfU[ 'ni f'J Yf\]bXYfi b[ 'j cb'J YfVfYWYb`Y]ghYb"

⊕'5bVYhfUW h'XYf'U\_hi Y`Yb'9fY][ b]ggY' ]gh'Yg'a Y\ f'XYbb'Y  
bck YbX][ ž'g]W'U'g'; Ya Y]bgWUZh'ni gUa a Ybni gW`Y]Y»Yb'ì bX  
[ Ya Y]bgUa 'Ui ZG]WYf\Y]hgUb`]Y[ Yb'ni 'fYU[ ]YfYb"'8]Y  
6YfY]hgWUZhž'⊕Zcfa Uh]cbYb'ni 'hY']Yb'ì bX'Y]bUbXYf'ni  
ì bhYfghØhnYbž' \_Øb bhY'YbhgWY]XYbX'XUni 'VY]hfU[ Ybž'ni \_ØbZh][ Y  
J cfZÀ`Y'ni 'j Yfa Y]XYb'ì bX'XUg'J YfhfUi Yb' ]b'X]Y'G]WYf\Y]h'XYg  
Y][ YbYb'Ni \Ui gYg'ni 'ghÀf\_Yb"

8 ]Y'; YZU\ fYb'j cb'9]bVfØWYb'ì bX

8 ]YVghÀ\`Yb' ]b'Df]j Uh\Ui g\U`hYb

8Yf'8]YVghU\`j cb'; Y'XVØfgYb'ì bX'9]bVfØWY' ]b'Df]j Uh\Ui g\U`hY  
g]bX'`Y]XYf'\_Y]bY'GY'hYb\Y]h'"C Zh' [ YgWY\Yb'gc`WY'HUHb' ]b'XYf  
8Àa a Yfi b[ 'cXYf' ]b'XYf'B UW hž'k Ybb'X]Y'6Yk c\ bYf'gW`UZyb  
cXYf'b]W h'ni ' <Ui gY'g]bX"'8]Y'GhUh]gh]\_`nY][ hž'XUgg'9]bVfØWY  
VYgcbXYfg' ]b'ì fVUbYb'; YV]YhYb'ni bY\ a Ybž'XcW'Ui W'`ÀbX' ]WY  
FY[ ]cbYb'g]bX'VYhfcZZYb"'@Ui h'XYf'Dc`]nY]' ]WYb' ?f]a ]bU`ghUh]gh]\_  
fD? GŁ&\$&%[ UV'Yg' ]b'8Yi hgW`UbX'WU"'+' "\$\$\$  
K c\bi b[ gY]bVfØWYž'k cVY'X]Y'5i Z\_`Àfi b[ gei chY'YXcW'fY'Uhj  
b]YXf[ ' ]gh"'8]Yg'nY][ hž'k ]Y'k ]W h[ 'Yg' ]ghž'dfÀj Ybh]j Y'A U» bU\ a Yb  
ni 'Yf[ fY]ZYbž'ì a 'XUg'Y][ YbY'Ni \Ui gY'ni 'g]WYfb"

8]Y'5i gk ]f\_i b[ Yb'Y]bYg'8]YVghU\`g'g]bX'c Zh'b]W h'bi f'a UhYf]Y`Yf  
BUhi f'"C dZYf'j cb'9]bVfØWYb'VYf]W hYb'\Ài Z[ 'j cb'Y]bYa'; YZØ\`  
XYf'ì bg]WYf\Y]h'ì bX'J Yf'Yh' ]W\_Y]h' ]b'XYb'Y][ YbYb'j ]Yf'K ÀbXYb"  
DgmW c`c [ ]gWY'6YfUhi b[ '\_Ubb' ]b'gc`WYb': À`Yb'\` ]ZfY]W'gY]bž  
ì a 'XUg'HfUi a U'VYggYf'ni 'j YfUfVY]hYb"

DfÄj Ybh]c bga U» bU\ a Yb`i bX`H]ddg`ni f  
9]bVfi W\gg]W\Yfi b[

I a`[ Y[ Yb`8]YVghÄ\`Y`i bX`9]bVfØW\Y`[ Yk UddbYh`ni`gY]bž`gc`hYb  
<Ui`gVYg]hnyf`Y]b][ Y`[ fi bX`Y[ YbXY`G]W\Yf\Y]hga U» bU\ a Yb`]b  
6YhfUW\h`n]Y\Yb`"8Uni`[ Y\Øfh`X]Y`≠ghU`Uh]cb`j`cb`\cW\k Yfh][ Yb  
GW\`ØggYfbž`G]W\Yf\Y]hg\_Ua`YfUg`i bX`6Yk Y[ i b[ ga`Y`XYfb`"5i W\  
X]Y`B UW\ VUfgW\UZh`gk UW\Y`\_Ubb`Y]bY`YZY`\_hj`Y`A`Ø[`]W\`\_Y]h`gY]bž  
i a`Ui`Zj`YfXÄW\h][ Y`5`\_hj`]hÄhYb`\]bni`k`Y]gYb`i bX`X]Y  
; Ya`Y]bgW\UZh`ni`ghÄf`\_Yb`"

Ni`gÄh`]W\`]gh`Yg`fUhgUa`ž`X]Y`Y][ Yb`Y`dYfgØb`]W\Y`G]W\Yf\Y]h`ni  
gW\i`Yb`i bX`g]W\`VYk`i`ggh`ni`gY]bž`k`Y`W\Y`G]W\Yf\Y]hgf]g]\_Yb`c`Zh  
ØVYfgY\Yb`k`YfXYb`"9]bY`Y]bZUW\Y`F`Y[ Y`]ghž`\_Y]bY  
K`Yfh[ Y[ YbghÄbXY`g]W\hVUf`]a`5i`hc`cXYf`]b`9]b[ Ub[ gVYfY]W\Yb  
XYf`K`c\bi`b[ `ni`"UggYb`"

8 Ug`fYW\h`]W\Y`I`a`ZY`X`ni`a`GW\i`hn`j`cf  
8]YVghU\`

≠8Yi`hgW\`UbX`[ ]Vh`Yg`nU\`fY]W\Y`; YgYhnYž`X]Y`XYb`C`dZYfgW\i`hn  
i bX`X]Y`?f]a`]bU`]hÄhgVY`\_Äa`dZi`b[ `ghÄf`\_Yb`gc`hYb`"6Y]gd]Y`gk`Y]gY  
\UVYb`; YgW\ÄX][ hY`Y]b`F`YW\h`Ui`Z`GW\UXYbgYfgUhn` `Y]b  
Dfc`nYggž`XYf`Y`XcW\`c`Zh`Ub[ k`]Yf][ `i bX`\_ca`d`]n]Yfh`gY]b`\_Ubb`"  
8 Ug`XYi`hgW\Y`F`YW\hggmghYa`V]YhYh`ni`XYa`j`YfgW\]YXYbY  
A`Ø[`]W\`\_Y]hYb`ni`f`GhfUZ]`YfZc`[ i b[ `j`cb`8]YVYbž`k`cVY]`X]Y`Dc`]nY]  
Y]bY`nYbhfU`Y`F`c`Y`Y]b`XYf`5i`Z`Äfi`b[ `gc`W\Yf`GhfUZhUhYb`gd]Y`h`"

8]Y`Dc`]nY]`V]YhYh`Ui`W\`≠Zcfa`Uh]cbgj`YfUbg`hU`hi`b[ Yb`ZØf`6Øf[ Yf  
Ubž`i`a`ØVYf`X]Y`F]g]\_Yb`j`cb`9]bVfØW\Yb`Ui`Zni`\_ÄfYb`i bX  
dfÄj`Ybh]j`Y`A`U» bU\ a Yb`ni`X]g`\_i`h]YfYb`"6Øf[ Yf`gc`hYb`g]W\`b]W\h  
gW\Yi`Ybž`gc`W\Y`5b[ YVchY`ni`bi`hnyb`i bX`U`\_hj`\_Ub`XYf`G]W\Yf\Y]h  
]b`]fYb`B UW\ VUfgW\UZhYb`a`]hni`k`]f`\_Yb`"

? cghYb`i bX`k`]fhgW\UZh`]W\Y`?`cbgYe`i`YbnYb  
j`cb`9]bVfØW\Yb

8]Y`k ]fhgWk UZh`Wk Yb` : c`[ Yb`Y]bYg`9]bVfi Wk g`\_ÒbbYb`Yf\YV`Wk  
gY]b"BYVYb`XYa`i ba ]hhY`VUfYb`J Yf`i gh`j cb` ; Y`X`i bX  
K Yfh[ Y[ Ybgh`ÀbXYb`a ØggYb`<Ui gVYg]hnYf`cZh`Ui Wk `GWk`ÀXYb`Ub  
HØfYb`i bX` : YbghYfb`VY\YVYbž`X]Y`Xi fWk`XYb`9]bVfi Wk  
Yb`hghUbXYb`g]bX"8]YgY`?cghYb`\_ÒbbYb`gWk bY``]b`X]Y`HUi gYbXY  
9i fc`[ Y\Yb`i bX`ghY``Yb`ZØf`j ]Y`Y`Y]b`Yf\YV`Wk Yg`Z]bUbni]Y``Yg  
F]g]\_c`XUf"

9]bY`J Yfg]Wk Yfi b[ `\_Ubb`nk Uf`\Y`ZYbž`X]Y`Z]bUbni]Y``Yb` : c`[ Yb`ni  
a ]`XYfbž`YXcWk`\UVYb`j ]Y`Y`J Yfg]Wk Yfi b[ Yb`ghfYb[ Y  
5bZcfXYfi b[ Ybž`X]Y`YfZØ`h`gY]b`a ØggYbž`i a`]a` : U`Y`Y]bYg  
9]bVfi Wk g`Y]bY`9b`hgWk`ÀX][ i b[ `ni`Yf\U`hYb"8U\Yf`]gh`Yg`k ]Wk h][ ž  
g]Wk`[ fØbX`Wk`ØVYf`X]Y`j YfgWk]YXYbYb`A Ò[ `]Wk`\_Y]hYb`XYf  
<Ui gfUhj Yfg]Wk Yfi b[ `ni`]bZcfa ]YfYb`i bX`g]Wk`]b`6Yni [ `Ui Z  
G]Wk Yf\Y]hgghUbXUfXg`VYfUhYb`ni ``UggYb"

8YhU]`g

6Ygi Wk Yb`G]Y`i bg`Ui Z.`X]Y!bUWk f]Wk hYb"bYh