

J YfVYggYfhY`A cV]`Zi b\_j Yfgcf[ i b[ .  
HY`Y\_ca `Yfk Y]hYfh`@H9`]b`A UbgZY`X!  
GØX\Ufn

8]Y`8Yi hgWXY`HY`Y\_ca `j YfVYggYfhX]Y`A cV]`Zi b\_j Yfgcf[ i b[  
]a `@UbX\_fY]g`A UbgZY`X!GØX\Ufn`Xi fW`XYb`5i gVUi `Y]bYg  
@H9!GhUbXcfhg" `8]Y`9f\Ø\i b[ `XYf`6UbXVfY]hY`i bX`VYggYfY  
9a dZUb[ ga Ø[ `]W\_X]hYb`]b`; YVÀi XYb`Yf\Ø\Yb`X]Y  
BYhmUVXYW\_i b[ `Ui Z`Yhk U`- - `i "6]g`&\$&\*`g]bX`k`Y]hYfY  
GhUbXcfhY`[ Yd`Ubh"9fZU\fyb`G]Y`a Y`f`ØVYf`X]Y`U\_hi Y`Yb  
9bhk ]W\_i b[ Yb`i bX`X]Y`Ni \_i bZiXYg`A cV]`Zi b\_Ui gVUi g"



A cV]`Zi b\_j Yfgcf[ i b[ `]a `@UbX\_fY]g  
A UbgZY`X!GØX\Ufn. `9]b`k ]W h][ Yf': c fhgW f]hh  
ZØf`X]Y'; Ya Y]bgW UZh

⇒a `@UbX\_fY]g`A UbgZY`X!GØX\Ufn`\Uh`X]Y`HY`Y\_ca ` \_Øfn`]W  
Yf\YV`]WY': c fhgW f]hhY`VY]`XYf`A cV]`Zi b\_j Yfgcf[ i b[ `Yfn]Y`h`A ]h  
XYf`9fk Y]hYfi b[ `Y]bYg`@H9!GhUbXc fhg`]b`K U``\Ui gYb`k ]fX`X]Y

A cV]Zi b\_UVXYW\_i b[ ]b`XYf`FY[ ]cb`Yhnh`XYi h]Wk`j YfVYggYfh"  
8]Yg`]gh`b]Wk`h`bi`f`Y]b`hY`Wk`b]gW`Yf`:`cfhgW`f]hž`gcbXYfb`U`h`Ui`Wk`  
k`Y]hfY]Wk`YbXY`5i`gk`]f`\_i`b[ ]Yb`Ui`Z`X]Y`@YVYbgei`U`]h`h`i`b`X`X]Y`  
k`]fhgW`UZh]Wk`Y`9b`hk`]W`\_i`b[ ]b`XYf`:`Y[ ]Yb`X"

8]Y`J`YfZ0[ VUf`\_Y]h]j`cb`gW`bY`Ya`A`cV]Zi`b`\_]gh`Yi`hni`hU[ ]Y`j`cb`  
Yb`hgW`Y]XY`bXY`f`6Y`XYi`hi`b[ ]ž`]bgVY`gcbXY`fY`XU`XY`f`6Y`XU`fZ`]ghY`h][`  
k`ÅW`gh`\_U`\_hi`Y`i`a`Y`hk`U``\$`Dfc`nY`bh`d`fc`]W`f`ž`gc`:`Y`cf[ ]j`cb`  
K`U[ ]b`Y`f`ž`i`b`h`Y`fb`Y`a`Y`b`gg`d`f`Y`W`Y`f`X`Y`f`8`Yi`hg`W`Y`b`H`Y`Y`\_ca`"A`]h`i`,`&  
A`cV]Zi`b`\_gh`Ub`X`c`f`h`Y`b`]a`\_@`Ub`X`\_f`Y]g`i`b`X`Y]b`Y`f`  
<Ui`g`U`h`g`UV`XY`W`\_i`b[ ]j`cb`fi`b`X`-`-`Dfc`nY`bh`k`Y`f`X`Y`b`]j`]Y`Y`  
<Ui`g`U`h`Y`i`b`X`i`b`h`Y`fb`Y`a`Y`b`V`Y`f`Y]hg`[ ]i`h]j`Y`fg`c`f[ ]h`8`Y`b`b`c`W`d`U`b`h`  
X]Y`H`Y`Y`\_ca`ž`V]g`&\$`&`\*`k`Y]h`Y`f`Y`&`,`G`h`Ub`X`c`f`h`Y`ni`Y`ff]W`k`h`Y`b`i`b`X`  
V`Y`gh`Y`Y`b`X`Y`A`U`gh`Y`b`a`]h`@`H`9`c`X`Y`f`g`c[ ]U`f`);`\_Ui`g`ni`V`Ui`Y`b`"

8]Y`6Y`XYi`hi`b[ ]X]Y`g`Y`g`5i`g`V`Ui`g`\_`U`b`b`b]W`k`h`[ ]Y`bi`[ ]V`Y`h`c`b`h`k`Y`f`X`Y`b`"  
`b`Y]b`Y`f`N`Y]hž`]b`XY`f`j`]Y`Y`A`Y`b`g`W`Y`b`]j`cb`ni`<Ui`g`Y`Ui`g`U`f`V`Y]h`Y`b`  
c`X`Y`f`\_`Ui`Z`X][ ]h`U`Y`8]Y`b`gh`Y]gh`i`b[ ]Y`b`\_`Ub[ ]Y`k`]Y`g`Y`b`g]b`X`ž`]gh`Y]b`Y`  
ni`j`Y`f`À`gg][ ]Y`b`h`Y`fb`Y`h]j`Y`f`V]b`Xi`b[ ]i`b`Y`f`À`gg`]W`"9]b`Y`j`Y`f`V`Y`gg`Y`f`h`Y`  
A`cV]Zi`b`\_j`Y`fg`c`f[ ]i`b[ ]i`b`h`Y`f`gh`h`h`ni`X`Y`a`\_`c`\_`U`Y`i`b`h`Y`fb`Y`a`Y`b`ž`  
X]Y`\_`Ui`Z`Y`Z]n]Y`b`h`Y`?`ca`a`i`b[ ]\_`Uh]c`b`Y`b`\_`Ub[ ]Y`k`]Y`g`Y`b`g]b`X`ž`i`a`  
\_`cb`\_i`ff`Y`bn`Z`Å`][ ]ni`V`Y]V`Y`b`"

:`Ø`f`X]Y`i`a`g`Y`h`ni`b[ ]X]Y`g`Y`f`D`fc`Y`\_`h`Y`]gh`X]Y`H`Y`Y`\_ca`\_`Y`X`c`W`\_`Ui`Z`X]Y`  
Ni`g`U`a`a`Y`b`U`f`V`Y]h`i`a`]h`?`ca`a`i`b`Y`b`i`b`X`:`fi`b`X`gh`Ø`W`\_`g`Y][ ]Y`b`h`Ø`a`Y`fb`  
Ub[ ]Y`k`]Y`g`Y`b`"X`Y`f`ž`X`Y`f`Y]b`Y`b`G`h`Ub`X`c`f`h`Z`Ø`f`Y]b`Y`b`A`cV]Zi`b`\_a`U`gh`  
c`X`Y`f`Y]b`Y`8`U`W`Z`Å`W`Y`ni`f`J`Y`f`Z0[ ]i`b[ ]gh`Y`Y`b`a`Ø`W`h`Y`ž`\_`U`b`b`g]W`  
Ub`X]Y`8`Yi`hg`W`Y`:`i`b`\_`hi`fa`k`Y`b`X`Y`b`ž`k`Y`W`Y`X]Y`G`h`Ub`X`c`f`h`Y`  
Ui`g`V`Ui`h`"5`\_`hi`Y`V`Y`Z]b`X`Y`b`g]W`k`Ø`V`Y`f`"\*\$`\$`\$`A`cV]Zi`b`\_gh`Ub`X`c`f`h`Y`  
]a`\_6`Y`hf]Y`V`ž`i`b`X`Y`X`Y`g`]W`f`\_`ca`a`Y`b`Y`hk`U`%)`\$\$`b`Y`i`Y`\_`]b`ni`"

8]Y`c`\_`U`Y`:`Ya`Y]b`g`W`U`Zh`U`h`X]Y`A`Ø[ ]W`k`\_`Y]hž`j`cb`X]Y`g`Y`f`  
9`b`hk`]W`\_i`b[ ]ni`d`fc`Z]h]Y`f`Y`b`\_`g`Y]Y`g`X`i`f`W`k`j`Y`f`V`Y`gg`Y`f`h`Y`  
:`f`Y]n`Y]h`a`Ø[ ]W`k`\_`Y]h`Y`b`k`]Y`G`h`f`Y`U`a`]b[ ]!`8]Y`b`gh`Y`c`X`Y`f`X`i`f`W`k`Y]b`Y`  
gh`Å`f`\_`Y`f`Y`5`b`V]b`Xi`b[ ]\_`Ub`X`U`g`X][ ]h`U`Y`:`Y`g`W`Å`Z`h`g`Y`V`Y`b`"  
`b`Z`c`fa`U`h]c`b`Y`b`ni`f`A`cV]Zi`b`\_!`5`V`X`Y`W`\_i`b[ ]i`b`X`a`Ø[ ]W`k`Y`b`  
5i`g`V`Ui`j`c`f`\_`U`V`Y`b`\_`Ø`b`b`Y`b`\_`Ui`Z`X`Y`f`H`Y`Y`\_ca`!`K`Y`V`g`Y]h`Y`\_`UV[ ]Y`fi`Z`Y`b`  
k`Y`f`X`Y`b`"

Ni gUa a YbZUggYbX`]gh`XYf`5i gVUi `XYf`A cV]`Zi b\_j Yfgcf[ i b[  
b]W h`bi f`Y]bY`hYW b]gW Y`Bchk YbX][ \_Y]hž`gcbXYfb`Ui W`Y]b  
k ]W h][ Yf`GW f]h`i]b`F]W h`i b[ `Y]bYf`ni \_i bZhgZÅ`][ Yb`i bX`X][ ]hU`Yb  
; YgY``gW UZi`a `@UbX\_fY]g`A UbgZY`X!GØX`Ufn"8]Y`HY`Y\_ca `gd]Y`h  
XUVY]`Y]bY`nYbhfU`Y`F c``Y`i bX`nY][ h`g]W `VYfY]hž`XYb  
<YfUi gZcfXYfi b[ Yb`XYg`X][ ]hU`Yb`K UbXY`g`Ybh[ Y[ Ybni hfYhYb"

8YhU]`g

6Ygi W`Yb`G]Y`i bg`Ui Z.`a Y]b!VYf`]b"bYh