

# GhfY]h'i a ' ? ]hU!6Y]hfÄ[ Y. 'K Yf'gc` `k ]f\_]Wk nU\`Yb3

⇒ a '@UbXhU[ 'GUWk gYb!5b\U'h'ghfY]hYb'5V[ YcfXbYhY'ØVYf'? ]hU!  
6Y]hfÄ[ Y'i bX'; YgWk k ]ghYf\_]bXfY[ Y'i b[ ""8YVUhYb'ØVYf  
ni \_ØbZh][ Y'?cghYb'i bX'9bhUghi b[ Yb'ZØf': Ua ']Yb'bY\ a Yb  
ni "

⇒ 'GUWk gYb!5b\U'h'k ]fX'gY]h'Y]b][ Yb'K cWk Yb']bhYbg]j 'ØVYf'X]Y  
: ]bUbn]Yfi b[ 'j cb'? ]bXYfhU[ YgghÄhhYb'X]g\_i h]Yfh"9]b'nYbhfU`Yg  
H\Ya U']gh'X]Y': fU[ Yž'cV'9'hYfb'ZØf']\f'Øb[ ghYg'cXYf'ZØf']\f  
Ä'hYghYg'? ]bX'? ]hU!6Y]hfÄ[ Y'nU\`Yb'gc`hYb""8]Y'Dcg]h]cbYb']a  
@UbXhU[ 'g]bX'\]YfvY]'gY\ f'i bhYfgWk]YX`]Wk ž'k Ug'ni `Y]bYf  
]bhYbg]j Yb'8YVUhY' [ YZØ\fh'\Uh"

⇒ 'A U[ XYVi f[ '\UVYb'X]Y'5V[ YcfXbYhYb'XYf'j YfgWk]YXYbYb  
@UbXhU[ gZfU\_h]cbYb'\_`Uf']\fY'i bhYfgWk]YX`]Wk Yb'GhUbXdi b\_hY  
VYnØ[ `]Wk `XYf'? ]bXYfVYhfYi i b[ gdc`]h]\_`XUf[ Y`Y[ h"6YgcbXYfg  
Ui ZÄ`][ 'k Uf'X]Y'i bY]b\Y]h]Wk\_Y]h]bYbYf\U`V`XYf'gWk Ufn!fch!  
[ Y`VYb'?cU']h]cb""8]YgY'i bhYfgWk]YX`]Wk Yb'5bg]Wk hYb'\_ØbbhYb  
Ui Wk`X]Y'6YfUhi b[ Yb'ØVYf'XYb'8cddY`\Ui g\U'h'&\$&)&#&\$&\*&  
Yf\YV`]Wk `VYY]bZi ggYb'i bX'ZØf'k Y]hYfY'?cbhfcj YfgYb'gcf[ Yb"

## 8]Y'; YgWk k ]ghYf\_]bXfY[ Y'i b[ `]a ': c\_i g

9]b'nYbhfU`Yg'9`Ya Ybh'XYf'8]g\_i gg]cb']gh'X]Y'gc[ YbUbbhY  
; YgWk k ]ghYf\_]bXfY[ Y'i b[ ""5\_hi Y`nU\`Yb': Ua ']Yb'a ]h'a Y\fyfYb  
? ]bXYfb']b'XYf'?f]ddYž'? ]hU'cXYf']a ' <c fh'bi f'ZØf'XUg'Ä'hYghY'? ]bX"  
78I 'i bX': 8D'a ØWk hYb'YXcWk`Y]bY`YbXYfi b[ `X]YgYf'FY[ Y'i b[  
Y]bZØ\fyb""8]Y'7\ f]ghXYa c\_fUhYb'ZcfXYfbž'XUgg'9'hYfb'\_ØbZh][  
`YX][ `]Wk `ZØf'XUg'Øb[ ghY'? ]bX'nU\`Yb'gc`hYb""B UWk `5b[ UVYb'XYg  
Gcn]U`a ]b]ghYf]i a g'\_ØbbhY`X]YgY`J YfÄbXYfi b[ `X]Y'5i g[ UVYb'XYg

@UbXYg'i a 'fi bX'% 'A ]''cbYb'9i fc'gYb\_Yb''8]YgY'A U» bU\ a Y  
\_ÒbbhY'ZØf'X]Y'9'hYfb'U''YfX]b[ g'Y]bY'\Ò\YfY'Z]bUbn]Y''Y'6Y'Ughi b[  
a ]h'g]W\ 'Vf]b[ Ybž'XU'X]Y'?cghYb'ZØf'X]Y'6YhfYi i b[ 'j]b'XYf'?f]ddY  
cZh'\Ò\Yf'Ui gZU''Yb'U'g'ja ' '?]bXYf[ UfhYb"

H]a 'HY» a Ubbž'XYf'\_]bXYf!'i bX'↑ [ YbXdc`]h]gW\Y'GdfYW\Yf'XYf  
78I ž'VYhcbhY'X]Y'Bchk YbX][ \_Y]hž'ØVYf'X]YgY'5i g[ UVYb'ni  
X]g\_i h]YfYb''5i W\ '?cbghUbh]b'Dchj'j cb'XYf': 8D'k ]Yg'XUfUi Z'\]bž  
XUgg': Y'\Ub'fY]nY'UV[ YVUi h'k YfXYb'a ØgghYbž'i bX'gW\i [ 'j cfž  
XUgg'XYf'6Y]hfU[ 'ZØf'XUg'Øb[ ghY'b]W\h'gW\i `dZ]W\h][ Y'?]bX  
[ YnU\`h'k YfXYb'gc`hY"

8]Y'8YVUhhY'k ]fX'ni gÅhn`]W\Xi fW\X]Y'VYj cfghY\YbXYb  
JYf\UbX'i b[ Yb'ØVYf'XYb'8cddY'\Ui g\U'h'gck ]Y'X]Y'ghUf\_  
[ Ygh]Y[ YbYb'5i g[ UVYb'XYg'@UbXYg'ZØf'X]Y'?]bXYfVYhfYi i b[ 'j]b  
XYb'j Yf[ Ub[ YbYb'š\YfYb'Ub[ Y\Y]nh''8]Yg'[ YgW\]Y\h'Ui W\ 'ja  
'?cbhYI h'XYg'K Y[ ZU`g'j cb'6i bXYga ]hhY'bž'X]Y'V]g'Ub[ 'VY]'XYf  
; YgW\k ]ghYf\_]bXYffY[ Y'i b[ 'j Yfk YbXYh'k i fXYb"

9]b'k Y]hYfYg'j]b'XYf'8]g\_i gg]cb'Ui Z[ Yk cfZYbYg'DfcV`Ya 'VYn]Y\h  
g]W\Ui Z'X]Y'5ba Y'Xi b[ Yb'ZØf'<cfhd`ÅhnY''9g'k i fXY'ZYgh[ YghY`hž  
XUgg'9'hYfb'cZh'Y]bYb'j Yf[ 'Y]W\gk Y]gY' [ Øbgh][ Yb'<cfhd`Uhn'ZØf  
; fi bXgW\i `\_]bXYf'Uba Y'XYbž'X]YgYb'YXcW\`b]W\h'bi hnYb''8]Yg  
\Uh'ni f': c`[ Yž'XUgg'g]Y'ZØf']\fY'; YgW\k ]ghYf\_]bXYf'j]b'XYf'?]hU  
\_Y]bY'6Y]hfÅ[ Y'nU\`Yb'a ØggYb''Gj Yb'Fcgca \_]Yk ]W\ž'Y]b'78I !  
5V[ YcfXbYhYf'i bX'6Øf[ Yfa Y]ghYf'j]b'6cfbYž'VYf]W\hYhY'j cb'Y]bYa  
<cfh]b'gY]bYf'; Ya Y]bXYž'j]b'XYa 'bi f'Y]b'6fi W\hY]'XYf  
Ub[ Ya Y'XYhYb'?]bXYf'fY[ Y'a Å»][ 'Ubk YgYbX'j]gh"

## Dcg]h]cb'XYf'GD8'i bX'XYf'Cddcg]h]cb

8]Y'GD8!: fU\_h]cb'd`ÅX]Yfh'YXcW\XUZØfž'Ub'XYf'VYghY\YbXYb  
FY[ Y'i b[ 'ZYghni \U'hYb''8]Y'5V[ YcfXbYhY'?Uhf]b'; YbgYW\_Y'k UfbhY  
XUj cfž'XUgg'Y]bY'ŸbXYfi b[ 'XYf'FY[ Y'i b[ 'X]Y': Ua ]]Yb'ni gÅhn`]W\  
VY'UghYb'\_ÒbbhY''8]Y'Gcn]U'XYa c\_fUhYb'ghØhnYb'g]W\Ui Z'XYb  
'?cU']h]cbgj YfhfU[ ž'XYf'Y]bY'XUi Yf\UZhY'9bh'Ughi b[ 'XYf': Ua ]]Yb  
j cf]g]Y\hž'gY'Vgh]ja ': U''Y'Y]bYg'K Y[ ZU`g'j cb'6i bXYga ]hhY'b"

5i W\XYf'8Yi hgW\Y'; Yk Yf\_gW\UZhVi bX'fB; 6Ł'gdf]W'hg]W\ZØf  
XYb'9f\U'h'XYf'U\_hi Y''Yb'; YgW\k ]ghYf\_]bXfY[ Y'i b[ 'Ui g''8; 6!  
@UbXYgW\YZ]b'Gi gUbbY'K ]YXYa YmYf'j Yfk ]Yg'XUfUi Z'XUgg  
]bgVYgcbXYfY'9'hYfb'a ]h'a Y\fyfYb'? ]bXYfb'Xi fW\X]Y'ghY][ YbXYb  
@VYVbg\U'hi b[ g\_cghYb'VYfY]hg'ghUf\_'VY'UghY'hg]bX''8 ]Y  
A Y\f\_]bXfY[ Y'i b[ 'ghY''h'Y]bY'k ]W'h][ Y'9bh'Ugh b[ 'XUf'i bX  
j Yff]b[ Yfh'Ui W\fy[ ]cbU'Y'i b[ 'Y]W\Y]hYb'VY]'XYb  
6YhfYi i b[ g\_cghYb"

8]Y'C ddcg]h]cb'Ài » YfhY'gW\UfZY'?f]h]\_Ub'XYb'J cfgW\À[ Yb'XYf  
?cU']h]cb''B]W\Y'5b[ Yf'j cb'XYb'@]b\_Yb'k ]Yg'XUfUi Z'\]bžXUgg  
Y]bY'YbXYfi b[ 'XYf'; YgW\k ]ghYf\_]bXfY[ Y'i b[ 'XUni'ZØ\fyb'k ØfXYž  
XUgg'9'hYfb'\_ØbZh][ 'ZØf'XYb'hYi YfghYb'6YhfYi i b[ gd'Uhn'U\Yb  
a ØgghYb''9]b'6Y]gd]Y''Ui g'K U''\Ui gYb'ja '@UbX\_fY]g'A UbgyZ'X!  
GØX\Ufn'j YfXYi h]W'h'X]Yg.'GhUh'XYg'[ Øbgh][ YfYb'< c fhd'UhnYg'ZØf  
XUg[ fØ» YfY'; YgW\k ]ghYf\_]bX'k ØfXY'g]W\ZØf'Y]b][ Y': Ua ]]Yb'Y]b  
5bgh]Y[ 'XYf'a cbUh]W\Yb'?cghYb'i a 'V]g'ni '&\$ \$'9i fc'Yf[ YVYb"

; cfXcb'?Ø\Yf'j cb'XYf'5Z8'VY\_fÀZh][ hY'YVYbZU''g'gY]bY  
l bhYfghØhni b[ 'ZØf'X]Y'6Y]VY\U'hi b[ 'XYf'VYghY\YbXYb'FY[ Y'i b[  
i bX'ZcfXYfhY'gc[ Uf'Y]bY'j c''ghÀbX][ Y'6Y]hfU[ gZfY]\Y]h'ZØf'9'hYfb"  
8]Y'; fØbYb'k ]YgYb'XUfUi Z'\]bžXUgg'X]Y'? ]hU!?'cghYb'U'g  
j Yfa Y]bh]W\Y'E i Y''Y'ZØf'9]bgdUfi b[ Yb'XYf'?cU']h]cb'[ Ybi hnh  
k YfXYb'\_ØbbhYb''Gi gUb'Gn]Vc fffU!GY]X']hn'Ài » YfhY'XUVY]'XYb  
K i bgW\ 'bUW\ 'J Yf'Àgg']W\\_Y]h'ZØf'X]Y'9'hYfb"

≠'XYf'[ Y[ Ybk Àfh][ Yb'8]g\_i gg]cb'nY][ 'hg]W\XYi h]W\ž'k ]Y'k ]W'h][  
Y]bY'\_UfY'<U'hi b[ 'j]b'XYf'? ]bXYfVYhfYi i b[ gdc`]h]\_'gh'K À\fybX  
Y]b][ Y'DUfhY]Yb'Ui Z'9]bgdUfi b[ Yb'XfÀb[ Ybž'a U\bYb'UbXYfY'X]Y  
Bch'k YbX][ \_Y]h'Ubž': Ua ]]Yb'Z]bUbn]Y''ni 'Ybh'UghYb''8 ]Y  
\_ca a YbXYb'K cW\Yb'k YfXYb'nY][ Ybž'k ]Y'g]W\X]Y'8YVUhhY  
Ybh'k ]W\_Y'b'k ]fX'i bX'k Y'W\Y'9bhgW\Y]Xi b[ Yb''YhnhYbX']W\  
[ YhfcZYb'k YfXYb"

8]Y': ]bUbn]Yfi b[ 'XYf'? ]bXYfVYhfYi i b[ 'j]gh]b'8Yi hgW\ 'UbX'Y]b  
nYbh'U'Yg'dc`]h]gW\Yg'H\Ya Už'XUg'b]W\h'bi f'Ui Z'@UbXYg!'gcbXYfb  
Ui W\ 'Ui Z'6i bXYgYVYbY'ja a Yf'k ]YXYf'X]g\_i h]Yfh'k ]fX''@Ui h'Y]bYf  
Ghi X]Y'XYg'8Yi hgW\Yb'≠gh]hi hg'ZØf'B cfa i b[ 'fB ≡Ł] cb '&\$&'

k i fXY`ZYgh[ YghY`hž`XUgg`X]Y`5i g[ UVYb`ZØf`X]Y`ZfØ\\_]bX`]WXY  
6]Xi b[ `]b`XYb`YhnhYb`đ\`fYb`g][ b]Z]\_Ubh[ Ygh]Y[ Yb`g]bX`"8]Yg  
k i fXY`Xi fW`Y]bY`?ca V]bUh]cb`Ui g`Yf\`Ø\`hYb`5bZcfXYfi b[ Yb`Ub  
X]Y`E i U`]hÀ`h`XYf`6YhfYi i b[ `gck ]Y`XYa`ghY][ YbXYb`6YXUfZ`Ub  
D`À`hnYb`j`Yfi fgUW`h`"æ`đ\`f`&`\$`&&`VYhfi [ Yb`X]Y`ÖZYb`h]WXYb  
5i g[ UVYb`ZØf`X]Y`?]bXYfVYhfYi i b[ `]b`8Yi hgW`UbX`a`Y`f`U`g`" %  
A ]`]UfXYb`9i fc"

9]b`nYb`hfU`Yg`DfcV`Ya`]gh`X]Y`i b[ `Y]WXY`J`YfhY]i b[ `XYf  
Z]b`UbN]Y`Yb`6Y`Ughi b[ Yb`Ui ZX]Y` : Ua` ]]Yb`"@Ui`hY]bYf`I`a`ZfU[ Y  
XYg`6i bXYgUa`hYg`ZØf`GhUh]gh]\_`Ui g`XYa`đ\`f`&`\$`&'` [ UVYb`\*`&`i  
XYf`VY`ZfU[ hYb`9`hYfb`Ubž`XUgg`X]Y`?]hU!6Y]hfÀ[ Y`Y]b`k`YgYb`h]WXYf  
Z]b`UbN]Y`Yf`8fi W`\_di b`\_h]b`\_]`fYa` <Ui g`U`hgVi X[ Y`h`g]bX`"  
6YgcbXYfg`VYhfc`ZYb`g]bX` : Ua` ]]Yb`a`]h`a`Y`fYfYb`?]bXYfbž`X]Y  
Xi fW` \`Ø\`YfY`6Y]hfU[ gnU` \`i b[ Yb`i`bhYf`8fi W`\_`[ YfUhYb`"8]Y  
8YVUhhY`ØVYf`X]Y` ; YgW`k`]ghYf\_]bXfY[ Y`i b[ `n]Y`h`XUfUi Z`UVž`Y]bY  
@Øgi b[ `ni` Z]bXYbž`X]Y`gck`c` \`X]Y`Z]b`UbN]Y`Y`b`đ`hYfYggYb`XYf  
 : Ua` ]]Yb`U`g`Ui`W`X]Y`<Ui g`U`hga`]hY`XYf`@ÀbXYf`VYfØW`\_g]W`h][ h`"

: ]b`UbN]Y`Y`Y`5i gk`]f`\_i b[ Yb`XYf`?]hU!6Y]hfÀ[ Y`

8]Y`i`bhYfgW`]YX`]WXYb`J`cfgW`À[ Y`ni`f`Y`bXYfi b[ `XYf  
 ; YgW`k`]ghYf\_]bXfY[ Y`i b[ ` \`UVYb`k`Y]hfY]WXYbXY`Z]b`UbN]Y`Y`Y  
5i gk`]f`\_i b[ Yb`"K`À`fYbX`78I`i`bX` : 8D`Uf[ i`a`Yb`h]YfYbž`XUgg`Y]bY  
F`YXi`n]Yfi b[ `XYf`5i g[ UVYb`XYg`@JbXYg`i`a`%`A` ]`]cbYb`9i fc  
a`Ø[ `]W`k`À`fYž`k`UfbYb`?f]h]\_Yf`j`cf`XYb`ni`g`À`hn`]WXYb`6Y`Ughi b[ Yb  
ZØf` : Ua` ]]Yb`"Ghi`X]Yb`nY][ Ybž`XUgg`]b`XYf`F`Y[ Y`X]Y`?cghYb`ZØf  
Y]bYb`?f]ddYbd`Uhn`Xi`fW`gW`b]hh`]W`&`\$`\$`V]g`(`\$`\$`9i fc`]a`A`cbUh  
VYhfU[ Ybž`k`À`fYbX`?]bXYf[ UfhYbd`À`hnY`c`Zi`[ Øbgh][ Yf`g]bX`"8]Yg  
\_ØbbhY`ni`Y]bYf` , VYf`Ughi b[ `XYf` : Ua` ]]Yb`ZØ`fYbž`k`Ybb`g]Y  
d`Øhn`]W`ZØf`XUg`Øb[ ghY`?]bX`]b`XYf`?f]ddY`nU`Yb`a`ØggYbž  
UbghUhh`ZØf`XUg`À`hYghY`?]bX`]a`?]bXYf[ UfhYb`"

Ni`g`À`hn`]W`gd]Y`h`X]Y`gc`n]U`Y`I` b[ `Y]W`X`Y]h`Y]bY`F`c`Y`"9]bY  
I`bhYf`gi`W`i`b[ `XYg`đ`gh]hi`hg`ZØf`5fVY]hga`Uf`\_h`i`bX  
6Yfi`ZgZcf`gW`i`b[ `f`H56E` \`Uh`[ YnY][ hž`XUgg`Y]b`\_ca`a`Yb`ggW`k`À`W`YfY  
 : Ua` ]]Yb`c`Zi`a`Y`f`i`bhYf`XYb`6Y`Ughi b[ Yb`XYf`?]hU!6Y]hfÀ[ Y  
`Y]XYb`"8]YgY` : Ua` ]]Yb` \`UVYb`gY`hYbYf`X]Y`A`Ø[ `]W`\_Y]hž`X]Y

\0\YfYb'6Y]hfÅ[ Y'Ui Zni Vf]b[ Ybž'k Ug'ni 'Y]bYf'6YbUW\hY']][ i b[ ]\fYf'?]bXYf']b'6Yni [ 'Ui Z'6YhfYi i b[ 'i bX'6]Xi b[ 'Z0\fYb'\_Ubb"

5\_hi Y`Y'dc`]h]gW\Y'F U\ a YbVYX]b[ i b[ Yb

8]Y'dc`]h]gW\Yb'F U\ a YbVYX]b[ i b[ Yb'Z0f'X]Y': ]bUbn]Yfi b[ 'j cb ?]bXYfVYhfYi i b[ 'g]bX'XYfnY]hj'cb'Y]bYa 'ghYh][ Yb'K UbXY` [ YdfÅ[ h'B UW\ 'XYa ' ?]hU!E i U'hÅhg[ YgYhn'j cb'&\$%-']gh'Y]bY J YfVYggYfi b[ 'XYf'6YhfYi i b[ gei U']hÅh'[ YZcfXYfhž'k Ug'cZha ]h \0\YfYb'?cghYb'Z0f'X]Y'@AbXYf'j YfVi bXYb']gh"@Ui h'XYa 'J YfVUbX XYf'GhÅXhY'i bX'; Ya Y]bXYb'fBGH; E'\Uh'X]Y'DUbXYa ]Y'X]Y Z]bUbn]Y`Y'G]hi Uh]cb'j ]Y'Yf'?ca a i bYb'ni gÅhn']W\ 'VY'UghYh''8Yf K Y[ ZU`'j cb'6i bXYga ]hhY'b'\_0bbhY'X]Y'gck ]Ygc'gW\cb Ub[ YgdUbbhYb'<Ui g\U'hY'k Y]hYf'VY'UghYb'i bX'Ui W\ 'X]Y 8]g\_i gg]cb'i a 'X]Y'; YgW\k ]ghYf\_]bXfY[ Y'i b[ 'bhYbg]j ]YfYb"

⇒X]YgYa 'Ni gUa a Yb\Ub[ 'gh'Ui W\ 'XYf'XYa c[ fUZ]gW\Y'K UbXY` j cb'6YXYi hi b[ "'8]Y'; YVi fhYbfUhY']b'8Yi hgW\ 'UbX']gh]b'XYb `YhnhYb'↵\fYb'ghUV]'[ YV`]YVYbž'k Ug'X]Y'Bchk YbX][ \_Y]h'Y]bYf Ui gfY]W\YbXYb'6YhfYi i b[ 'j cb'?`Y]b\_]bXYfb'i bhYfghfY]W\h"@Ui h Y]bYf'Dfc[ bcgY'XYg'GhUh]gh]gW\Yb'6i bXYgUa hYg'k ]fX'XYf'6YXUfZ Ub'6YhfYi i b[ gd'ÅhnYb']b'XYb'\_ca a YbXYb'↵\fYb'j cfUi gg]W\h']W\ ghY][ Ybž'k Ug'X]Y'U\_hi Y`Yb'8YVUhYb'ØVYf'X]Y': ]bUbn]Yfi b[ 'bcW\ Xf]b[ `]W\Yf'a UW\h"

8YhU]`g

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