

## 8 ]Y 'F ]b [ Y 'XYf 'A UW h. '9d ]gcXY '& 'Vf]b [ h Zf]gWY Yb 'K ]bX 'bUW 'A ]hhY`YfXY

⊕ 'XYf' f]h]\_ni f'9d]gcXY' K c'X]Y'GhYfbY'ZfYa X'g]bX 'j cb  
H\Y '@cFX'cZ'h\Y'F]b[ g.'H\Y'F]b[ g'cZ'Dck Yf 'k ]fX'X]Y  
j YfVYggYfhY'Ghfi \_hi f'XYf'< UbX'i b[ '[ Yk ØfX][ h"

8 ]Y'nk Y]hY '9d]gcXY'XYf'a ]h'GdUbbi b[ 'Yfk UfhYhYb'GYf]Y' H\Y  
@cFX'cZ'h\Y'F]b[ g.'H\Y'F]b[ g'cZ'Dck Yf ž'VYh]hY'h' K c'X]Y'GhYfbY  
ZfYa X'g]bX ž'nY][ h'Y]bY'\_UfY'J YfVYggYfi b[ 'j]b'XYf'Ghfi \_hi f]Yfi b[  
XYf'< UbX'i b[ 'ja 'J Yf[ 'Y]W'ni f'YfghYb'9d]gcXY''8 ]Y'A UWYf  
DUhf]W'\_A W? Um'i bX'æ\ b'8''DUmbY'\UVYb'g]W'A Ø\Y'[ Y[ YVYbž'i a  
XYb'Ni gWUi Yfb'Y]bY'\_ca dU\_hYfY'i bX'gdUbbYbXYfY'9fZU\fi b[  
ni 'V]YhYbž'X]Y'gck c'\X]Y'7\UfU\_hYfYbhk ]W'\_i b[ 'U'g'Ui W'X]Y  
< UbX'i b[ gh]YZY'ZØfXYfh"

⊕ X]YgYf'9d]gcXY'ghY\Yb'a Y\ fYfY'nYbhfU`Y': ][ i fYb'a 'i: c\_i g"  
6YgcbXYfg'Ui ZÄ`][ 'gh'X]Y'6Yn]Y\i b[ 'nk ]gWYb'8i f]b'⊕'i bX  
gY]bYa 'J UhYfž'X]Y'Ui Z[ fi bX'Y]bYg'a ]ggj YfghÅbX`]WYb'?cbZ]\_hg' ]b  
]\fYf': Ua ]'Y'i bhYf'8fi W'\_[ YfÅh''8 Ug'ZØ\fh'XUni ž'XUgg'X]Y'Nk Yf[ Y  
]b'? \UnUX!Xxa 'XUg'@]W'hj Yf'YfYb'i bX'X]Y'GhY]bgÅb[ Yf]bbYb  
b]W'hg'a Y\ f'\ØfYb'\_ØbbYb''; U'UXf]Y'ž'Y]bY'XYf'< Ui dhZ][ i fYbž  
nY][ h'g]W'YbhgW'cggYbž'bUW'9fY[ ]cb'ni 'fY]gYbž'i a '7Y'YVf]a Vcf  
j cf'XYf'k U\ fYb'≠Ybh]hÅh'j cb'< U'VfUbX'ni 'k UfbYb''< U'VfUbXž']b  
K ]f\_]W'\_Y]h'GUi fcbž'hÅi gW'h'≠Ybh]hÅh'U'g'5bbUhUf'j cfž'i a 'X]Y  
9'VYb'ni 'a Ub]di 'j]YfYb''⊕ '@Ui ZY'XYf'9d]gcXY'k ]fX'X]Y  
'ca d'Yi ]hÅh'X]YgYf'?cbZ]\_hY'i bX'XYfYb'5i gk ]f\_i b[ Yb'XYi h]W"

## 8 ]Y '< UbX'i b[ 'Yb hZU`hYh'g]W

⊕ ' K c'X]Y'GhYfbY'ZfYa X'g]bX 'Yf'YVYb'X]Y'Ni gWUi Yf'Y]b  
\_UfYfYg'B UffUH]j ž'XUg' ]bg[ YgUa hij ]Yf'< UbX'i b[ gghfÅb[ Y'i a ZUggh"

8]Yg'a U[ 'nk Uf'j ]Y`YfgWXY]bYbž'k ]fX`YXcW`YZZ]n]Ybhi bX  
gdUbbYbX'dfÅgYbh]Yfh"8]Y'5i X]c] ]gi U']hÅhi bX`X]Y`Z`a ]gWY  
E i U']hÅh'g]bX`XUVY]'`YfUi gfU[ YbXž'k Ug'ni `Y]bYa `i bhYf`U`hgUa Yb  
9f`YVb]g`VY]hfÅ[ h"9]bY`XYf`VYXYi hYbXghYb`GnYbYb`]gh`X]Y  
J Yfgi W`i b[ `Xi fW`<U`VfUbx#GUi fcbž7Y`YVf]a Vcf`ni f  
[ Ya Y]bgUa Yb`GW`a ]YXi b[ `XYf`F]b[ Y`ni `VYk Y[ Ybž'k Ug'[ i h  
Xi fW`XUW`hi bX`Ui g[ YZØ`fh]gh"

5i W`XYf`<UbX`i b[ gghfUb[ `i a `X]Y`Nk Yf[ Y`i bX`]`f`bYi Yg  
a U[ ]gW`Yg`9`Ya Ybž`X]Y`GhY]bgÅb[ Yf]bbYbž`Yfk Y]gh'g]W`U`g  
]bbcj Uh]j `i bX`[ Y`i b[ Yb`"≠gVYgcbXYfY`X]Y`8 UfghY`i b[ `j cb`8]gUž  
X]Y`\_`i [ `i bX`k Ufa `Yfn][ `ni [ `Y]W`]ghž`j Yf`Y`\h`XYf`; YgW`]W`hY  
ni gÅm`h]W`Y`H]YZY"8 Ug`5i ZY]bUbXYfhfYZYb`j cb`HfUX]h]cb`i bX  
: cfhgW`f]h]b`?`UnUX!X`a `k ]fX`j ]gi Y`V`VY]bXfi W`YbX`i bX  
Ya ch]cbU`bUW`j c`n]Y`VUf`i a [ YgYmh"8]Y`8 UfghY`i b[ `XYg  
Nk Yf[ Y`YVYbg`i bhYf`XYa `6Yf[ `]gh`gck c`\_`]bcfY]Z`U`g`Ui W`  
bcghU`[ ]gW`ZØf`: Ubg`XYf`DYhYf!`JW`gcb!: ]`a Y"

5`YfX]b[ g`V`Y]Vh`X]Y`7`UfU`\_hYf]g]Yfi b[ `j cb`; U`UXf]Y`Ua V]j U`Yb`h`  
≠fY`<UbX`i b[ Yb`YfgWXY]bYb`cZ]a di `g]j `i bX`Ya ch]cbU`ž`k Ug]a  
`Øb[ YfYb`?`cbhYi h`X]YgYf`: ][ i f`nk Uf`bUW`j c`n]Y`VUfž`UVYf`b]W`h  
]XYU`i a [ YgYmh]gh"≠`]`fYb`GnYbYb`a ]h; ]!; U`UX`i bX`9`fcbX  
\_ØbbhY`a Y`f`9]bg]W`h[ YZcfXYfh`k YfXYbž`XUa ]h]\fY`K Y][ Yfi b[ ž  
F UhgW`Å[ Y`Ubni bY`a Ybž[ `Ui Vk ØfX][ `V`Y]Vh"8]Y`7`Ya ]Y  
nk ]gW`Yb`XYb`8 UfghY`Yfb`nÅ`h`YXcW`ni `XYb`<][ `]\[ `hg`XYf  
9d]gcXY`i bX`gcf[ h`XUZØfž`XUgg`X]Y`; fi ddY`XYf`9`VYb`]b`]\fYa  
Ni gUa a Ybgd]Y`ØVYfnYi [ h"

## 8]Y`6YXfc`i b[ `j cb`GUI fcb

DUFU`Y`ni `XYb`9f`YVb]ggYb`]b`?`UnUX!X`a `i bX`@]bXcb`[ YghU`hYb  
g]W`X]Y`; YgW`Y`b]ggY`]b`XYf`K ØghY`j cb`F`x`b`gdUbbYbX" `Bcf]  
i bX`Dcddmž`X]Y`j cb`a mghYf]ÖgYb`F Y]hYfb`j YfZc`[ h`k YfXYbž`gYhnYb  
Y]bY`5ha cgd`ÅfY`XYf`l b[ Yk ]gg`Y]h`i bX`; YZU`f`]b`GnYbYž`X]Y`X]Y  
J YfZc`[ i b[ `XfUa Uh]gW`]bhYbg]j ]Yfh"8]Y`cdh]gW`UbgdFYW`YbXY  
l a gYhni b[ `X]YgYf`GnYbYb`nY][ hž`XUgg`Ui W`]b`XYf`K ØghY`X]Y`K Y`h  
j cb`A ]hY`YfXY`YVYbX][ `i bX`fY]nj c`V`Y]Vh"

≠g[ YgUa h'VY[ YVYb'g]W'X]Y'A UWYf'XYf'GYf]Y' ]b'X]YgYf'9d]gcXY  
Ui ZY]bYb'YfnÅ\`Yf]gWYb' < Ò\YbZi [ "'8Yf'dfc[ fYgg] YfY'5bgUhn']a  
< ]bV`]W`Ui Z'X]Y' < UbX'i b[ 'i bX'X]Y': ][ i fYb'\Uh'XUg'DchYbn]U'ž'X]Y  
Ni gW'Ui Yf'a Y\`f'ni 'ZYggY'b'i bX'X]Y'; YgW'W'hY'j cfUbni hfY]VYb"  
I bX'k Å\`fYbX' K c'X]Y'GhYfbY'ZfYa X'g]bX' 'X]Y'VYghYb'i bX  
gdUbbYbXghYb'9`Ya YbhY'XYf'V]g\Yf][ Yb'9d]gcXYb'Ui Z[ fY]Zh'k ]fX  
ni [ `Y]W'XUg'DchYbn]U'XYf'[ YgUa hYb'GHUZZY``]b'XYb': c\_i g  
[ YfØW\_h"

≠'XYf'\_U\_hi Y``Yb'9d]gcXY' [ Y`]b[ h'Yg'XYb'J YfUbhk cfh]WYbž'X]Y  
< UbX'i b[ 'ghfUZZ'i bX'Ui Z'XYb'Di b\_h[ YVfUW'h'ni 'dfÅgYbh]YfYbž  
k Ug'XYb'Ni gW'Ui Yfb'Y]bY'Ui ZfY[ YbXY'i bX'bUW'j c``n]Y\`VUfY  
; YgW'W'hY'V]YhYh"BYi [ ]Yf'i bX'GdUbbi b[ 'ghY\Yb'XUVY']ja  
J cfXYf[ fi bXž'c\`bY'XUgg'X]Y'; Yk ]W'hi b[ 'Ui Z'VYgh]a a hY  
7\`UfU\_hYfY'ØVYf\`UbX'b]a a h"9g'V`Y]Vh'UVni k UfhYbž'k ]Y'g]W'X]Y  
j YfgW'YXYbYb' < UbX'i b[ gghfÅb[ Y']ja '?cbhYI h'XYf'\_ca a YbXYb  
9d]gcXYb'k Y]hYfYb'k ]W\_Y'b"

8]Y'nk Y]hY': c`[ Y'a Uf\_]Yfh'gca ]hY]bYb'dcg]h]j Yb'K YbXYdi b\_h]b  
XYf'9fnÅ\`k Y]gY'j cb' H\Y'@cfX'cZ'h\Y'F]b[ g. 'H\Y'F]b[ g'cZ  
Dck Yf ž'XYf' < cZZbi b[ 'Ui Z'a Y\`f'gdUbbYbXY'; YgW'W'hYb'k YW\_h"

8YhU]`g

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