

7\]hncf[ Uf\ : cfh]b'≠bX]Yb.'9g]gh'b]W\ h  
XUg'HU^A U\U`

7\]hncf[ Uf\ : cfh]gh'XUg'&k Y`j cb'F U'Ugh\Ub]ž'XUg'gY'hYb'U`g  
Y]b'A i gg'VYk cfVYb'k ]fX'K Ybb'G]Y'g]W\ YbhgW\Y]XYbž'X]Y  
FY]gY'≠fYg'@VYbg'ni 'i bhYfbY\ a Ybž'i a ']'b'≠bX]Yb' ni 'g]W\  
gY`Vgh'ni 'Z]bXYb ž'k ]fX'g]Y'k U\fgW\Y]b'W\ Y]bY'FY]gY'ni a  
HU'ž'Y]b'8UhY'a ]h'XYa '8U'U]'@Ja Už'Y]bY'Hci f'Xi fW'X]Y  
fcgUZUfVYbY'GhUXh'>]di f'i bX'j ]Y`Y'UbXYfY'VY]b\U'hYb  
Gd]f]h'cZ'≠bX]U !9f'YVb]ggYž'X]Y'≠bYb'X]Y'FY]gYZØ\ fYf'V]YhYb  
k YfXYb"8]YgY'GY\Ybgk ØfX][ \_Y]hYb'g]bX'bUhØf'W\ U`Y'≠fY  
NY]h'k Yfhž'UVYf'j YfdUggYb'G]Y'b]W\ h'7\]hncf[ Uf\ : cfhž'XUg  
&k Y`j cb'F U'Ugh\Ub]ž'XUg'gY'hYb'U`g'A i gg'VYk cfVYb'k ]fX"  
≠W'\_Ua ']'b'7\]hncf[ Uf\ 'bUW\ Y]bYf' ( , !ghØbX][ Yb'FY]gY'j cb  
A i a VU]'Ubž'X]Y'j YfgdÀhYhY'NØ[ Y'fD'i fU'Ł'i bX'Y]bY'\UfhY'B UW\ h

7\]hncf[ Uf\ : cfh]gh'XUg'&k Y`j cb'F U'Ugh\Ub]ž'XUg'gY'hYb'U`g'Y]b  
A i gg'VYk cfVYb'k ]fX

K Ybb'G]Y'g]W\ YbhgW\Y]XYbž'X]Y'FY]gY'≠fYg'@VYbg'ni  
i bhYfbY\ a Ybž'i a ']'b'≠bX]Yb' ni 'g]W\  
gY`Vgh'ni 'Z]bXYb ž'k ]fX'g]Y  
k U\fgW\Y]b'W\ Y]bY'FY]gY'ni a 'HU'ž'Y]b'8UhY'a ]h'XYa '8U'U]  
@Ja Už'Y]bY'Hci f'Xi fW'X]Y'fcgUZUfVYbY'GhUXh'>]di f'i bX'j ]Y`Y'  
UbXYfY'VY]b\U'hYb' Gd]f]h'cZ'≠bX]U !9f'YVb]ggYž'X]Y'≠bYb'X]Y  
FY]gYZØ\ fYf'V]YhYb'k YfXYb"

8]YgY'GY\Ybgk ØfX][ \_Y]hYb'g]bX'bUhØf'W\ U`Y'≠fY'NY]h'k Yfhž'UVYf  
j YfdUggYb'G]Y'b]W\ h'7\]hncf[ Uf\ : cfhž'XUg'&k Y`j cb'F U'Ugh\Ub]ž'  
XUg'gY'hYb'U`g'A i gg'VYk cfVYb'k ]fX"

≠W'\_Ua ']'b'7\]hncf[ Uf\ 'bUW\ Y]bYf' ( , !ghØbX][ Yb'FY]gY'j cb  
A i a VU]'Ubž'X]Y'j YfgdÀhYhY'NØ[ Y'fD'i fU'Ł'i bX'Y]bY'\UfhY'B UW\ h

Ui ZY]bYa '6U\bghY][ 'j]b'F Uh'Ua 'š bW]cb'fY]bY' [ Ubni'UbXYfY  
; YgW]W\hY'VY]b\U'hYhY"

'U'h1 : cfh'7\]hnc[ Uf[ \ '8]Y'V'Ui Y'GhUXh 2: cfh'7\]hnc[ Uf[ \ '8]Y  
V'Ui Y'GhUXh

⇒W \UhhY'b]Y'j cfž'NY]h'j]b'7\]hncf[ Uf\ 'ni 'j Yfvf]b[ Yb' ' ]W\ 'k Uf'Ui Z  
XYa 'K Y[ 'k Y]hYf'bUW\ 'BcfXYb'bUW\ '6\]'k UfU' 'UVYf'XU'a Y]b'Ni [ Ua  
'gdÅhYb'5VYbX'Ub[ Y\_ca a Yb'k Ufž'gU\ ]W\ 'XYb  
GcbbYbi bhYf[ Ub[ 'ØVYf'XYf'k i bXYfgW\ ÒbYb' V'Ui Yb'GhUXh 'fZUgh  
U''Y'<Åi gYf'g]bX'VYa U'h'\]a a Y'V'Ui ěi bX']W\ 'XUW\hYž'Y]b'cXYf  
nk Y]BÅW\hY'\]Yf'k ØfXYb'a ]f'ØVYf\Ui dh'b]W\h'gW\UXYb"

⇒W 'gdfUb[ 'j]b'Y]b'Hi \_'Hi \_'i bX'VUh'XYb': U\fyfž'a ]W\ 'ni 'Y]bYa  
UbghÅbX][ Yb'<chY'ni 'Vf]b[ Yb'"K Å\fybX'XYf': U\fh'ZfU[ hY']W\ '\b  
bUW\ 'XYf'GhUXh'i bX'Yf'gU[ hY'a ]fž'XUg'9]bn][ Yž'k Ug'ni 'gY\Yb'gY]ž  
gY]X]Y': Yghi b[ 'Ui Z'XYa ' <Ø[ Y'a ]h'6']W\_ 'Ui Z'X]Y'GhUXh"

B UW\ 'Y]bYa ' \_i fnYb'; YgdfÅW\ 'UffUb[ ]YfhY'Yfž'a ]W\ 'Ua 'A cf[ Yb  
UVni \c'Yb'i bX'a ]W\ 'Ui ZY]bY'a U» [ YgW\ bY]XYfhY' Hci f  
a ]hni bY\ a Yb'"8]Y': Yghi b[ 'j]gh'k ]f\_']W\ 'VYY]bXfi W\_YbX'"9fgha U'g  
]a ' ; "š\ \f\i bXYfh'YfVUi hž'k i fXY'Yg'j ]Y'Y'A U'Y' [ Yd'ØbXYfhž  
VY'U[ Yfhž'nYfghØfh'i bX'k ]YXYf'Ui Z[ YVUi h' 'i bX']gh'XYbbcW\ 'X]Y  
[ fØ» hY' 'i bX'VYghY': Yghi b[ 'j]b' [ Ubni' bX]Yb"

'U'h1 7\]hncf[ Uf\!: cfh 2 7\]hncf[ Uf\!: cfh

K UbXYfb'G]Y'Xi fW\ 'X]Y'Fi ]bYbž'Yf\_']a a Yb'G]Y'X]Y'HØfa Yž  
hUi W\Yb'G]Y' ⇒fY': Ø» Y' ]b'X]Y': \Uhg'i bX'gdfYW\Yb'G]Y'a ]h'XYb  
A YbgW\Yb'"B]W\h'j ]Y'Y'K Ygh'Yf'gW\ UZZYb'Yg'\]Yf\Yf' 'F U'Ugh\Ubg  
j ]Y'Y'UbXYfY'GY\Ybgk ØfX][ \_Y]hYb'i bX'9f'YVb]ggY''Yb\_Yb'g]Y'ni  
cZi'UV' 'U'gc'g]bX'X]Y'9]b\Y]a ]gW\Yb'gY\ f'XUfUb' ]bhYfYgg]Yfhž'g]W\  
ni 'i bhYf\U'hYb"

K ]Y'VYfY]hg'Yfk Å\bž'ØVYfV']W\_h'XUg': cfh'X]Y'\_Y]bY'i bX'gW\ ÒbY  
GhUXh'7\]hncf[ Uf\ 'cXYf'\_i fn' 7\]hncf " ⇒W 'gU» 'ghi bXYb'Ub[ 'j]b'XYf  
GcbbY'i bX'V']W\_hY'Ui Z'X]Y'Xi bgh][ !V'Ui Y'5i gg]W\h'"7\]hncf[ Uf\ ' ]gh  
Y]b'fi \][ Yf'Cfh'ni a 'B UW\XYb\_Yb'i bX'V]YhYh'Y]bY'dYfZY\_hY'DUi gY

j ca ' ? `]gWYY!Ni [ "

'U`h1 7\]hcf[ Uf\!: cfh 2

7\]hcf[ Uf\ ': cfh. 'XUg'K YgYb'h`]WXY

FY]gYnY]h'JYfa Y]XYb'G]Y'XYb'5'hk Y]VYfgca a Yf' 'G]Y'\_ÖbbYb' ]\b  
b]W h'\UW\_Yb"'8Yf'Vf]h]gWXY'K ]bhYf'fK Y]\bUW hYbž'k Ybb'G]Y'XYf  
: Ua ]']Y'YbZ]Y\Yb'\_ÖbbYbL']gh'Y]bY' [ fc» Ufh][ Y'NY]hž'i a  
F U'Ugh\Ub'ni 'VYfY]gYb"'8]Y'HU[ Y'g]bX'\Y]» 'i bX'gcbb][ 'i bX  
k Y]WXYb'\_Ø\YfYb'5VYbXYb' 'Ub'a UbWXYb'5VYbXYb'VfUi WXYb'G]Y  
j ]Y''Y]W h'gc[ Uf'Y]bYb'Di ''cj Yf°

K ]Y.'7\]hcf[ Uf\''Y[ h'Yhk U'%'\$\$'\_a 'Ögh]W 'j cb'l XU]di f'cXYf'&\$\$  
\_a 'gØX`]W 'j cb'5'a Yf'i bX']gh[ i h'a ]h'Ni [ 'i bX'6i g'ni 'YffY]WXYb"  
K Ybb'G]Y'Ui g'XYa 'GØXYb'\_ca a Ybž'bY\ a Yb'G]Y'Y]bYb'Ni [ 'bUW  
F Uh'Ua 'ž bW]cb'i bX'j YfVf]b[ Yb'G]Y'Y]b'cXYf'nk Y]'Ghi bXYb  
XUa ]hž'g]W 'a ]h'XYb'9]b\Y]a ]gWXYb'ni 'i bhYf\U'hYbž'VYj cf'G]Y'XYb  
bÅW ghYb'Ni [ 'bUW 'BcfXYb'bUW '7\]hcf[ Uf\ 'bY\ a Yb"

K Ybb'G]Y'; 'ØW\_\UVYbž'hfYZZYb'G]Y'Xcfh'Ui Z'Y]bYb'WUfa UbhYb  
9]b\Y]a ]gWXYb'bUa Ybg'8\Ub]ž'XYf'G]Y'Ui Z'gY]bYa 'A chcffUX  
a ]hb]a a h

@cbY`m'D`UbYh'`bX]U']gh'Y]b'i a ZUggYbXYf'FY]gYZØ\fyf'ZØf'XUg'@UbXž  
]XYU'`ZØf'X]Y'Yb][ Ybž'X]Y'gck c\`X]Y'k ]W h][ ghYb  
GY\Ybgk ØfX][ \_Y]hYb'Yf\_i bXYb'U'g'Ui W'k Yb][ Yf'VYZU\fybY  
GhfU» Yb'bY\ a Yb'a ÖW hYb"

"

8YhU]`g

6Ygi WXYb'G]Y'i bg'Ui Z.'Y]bY!fY]gY"XY