

? UgUW\ ghUb`j Yf\ Åb[ h'? Ui Z]a ]hg`ZØf  
? fmdhc!9]bnY`Ub`Y[ Yf` `F Y[ i `]Yfi b[

8]Y`6Y\ ÒfXYb`]b`? UgUW\ ghUb`\ UVYb`6YgW\ fÅb\_i b[ Yb`ZØf`X]Y  
A Yb[ Yb`Y]b[ YZØ\ fhž`X]Y`?`Y]bUb`Y[ Yf`]b`? fmdhc k Å\fi b[ `Ub  
`c\_U`Yb`6ÒfgYb`\_Ui ZYb`\_ÒbbYb`"6YUa hY`VY[ fØbXYhYb`X]Y  
9bhgW\Y]Xi b[ `a ]h`XYf`Bchk YbX][ `\_Y]hž`Df]j UhdYfgcbYb`j cf  
XYb`F]g]\_Yb`X][ ]hU`Yf`:]bUb`nUb`U[ Yb`ni`gW\ØhnYb`  
`b] YghcfYb`]b`? UgUW\ ghUb`\_ÒbbYb`V]g`ni`%"\$\$\$`I G!8c`Uf  
dfc`A`cbUh]b`? fmdhc`\_Ui ZYbž`c`bY`9]b`\_ca`a`Yb`Ubni`[ YVYb  
? UgUW\ ghUb`\Uh`@]a ]hg`ZØf`? fmdhc!`? Åi ZY`j`cb`Df]j UhUb`Y[ Yfb  
Ub`XYb`VY]a`5ghUbU``b`hYfbUh]cbU`:`]bUbW]U`7Yb`hYf  
fY[ ]ghf]YfhYb`6ÒfgYb`Y]b[ YZØ\ fh`f5`≡`7`łž`VYf]W\hYhY`XUg  
`c\_U`Y`K ]fhgW\ UZhgbUW\ f]W\hYbdcfhU`7Ud]hU`i`bhYf`6Yfi`Zi`b[  
Ui`Z`X]Y`5ghUbU`:]bUbW]U`GYfj ]Wg`5i`h\cf]hm`f5: G5Ł``b`XYf  
JYfÒZZYbh]W\i`b[ `k ]fX`XUfUi`Z`\]b[ Yk ]YgYbž`XUgg`X]Y  
YbhgdFYW\YbXYb`Y`bXYfi`b[ Yb`XYf`F Y[ Y`b`ZØf`X]Y`5\_h]j ]hÅhYb  
Ua`:`]bUbnnYbhfi`a`]b`/`Ua`d^Y``]d/

8]Y'6Y\0fXYb']b'? UgUW\ ghUb'\ UVYb'6YgW\ fÀb\_i b[ Yb'Z0f  
X]Y'A Yb[ Yb'Y]b[ YZ0\ fhž'X]Y'?`Y]bUb`Y[ Yf']b  
? fmdhc k À\fi b[ 'Ub`c\_U`Yb'60fgYb'\_Ui ZYb'\_0bbYb"  
6YUa hY`VY[ f0bXYhYb`X]Y'9bhgW\Y]Xi b[ 'a ]h`XYf  
Bchk YbX][ \_Y]hž'Df]j UhdYfgcbYb'j cf`XYb'F ]g]\_Yb`X][ ]hU`Yf  
: ]bUb`nUb`U[ Yb`ni`gW\ 0hnYb"

⇒bj Yghc fYb']b'? UgUW\ ghUb'\_0bbYb`V]g`ni  
%"\$\$\$'I G!8c``Uf'dfc`A cbUh']b'? fmdhc  
\_Ui ZYbž'c\`bY'9]b`ca a Yb`Ubni [ YVYb

? UgUW\ ghUb`\ Uh`@]a ]hg'Z0f'? fmdhc!?'Ài ZY`j cb'Df]j UhUb`Y[ Yfb`Ub  
XYb`VY]a`5ghUbU`⇒hYfbUh]cbU`: ]bUbW]U`7YbhYf`fY[ ]ghf]YfhYb  
60fgYb`Y]b[ YZ0\ fh'f5 = 7 kž'VYf]W\ hYhY`XUg`c\_U`Y  
K ]fhgW\ UZhgbUW\ f]W\ hYbdcfhU`7Ud]hU`i bhYf'6Yfi Z] b[ 'Ui Z`X]Y  
5ghUbU`: ]bUbW]U`GYfj ]W`g`5i h\cf]hm'f5: G5k"

⇒`XYf`J Yf0ZZYbh]W\i b[ `k ]fX`XUfUi Z`\]b[ Yk ]YgYbž`XUgg`X]Y  
YbhgdYfW\YbXYb`Y`bXYfi b[ Yb`XYf`F Y[ Y`b`Z0f`X]Y`5\_h]j ]h`hYb`Ua  
: ]bUb`nnYbhfi a` ]b`Bi f!Gi`hUb`]a`ž` ]j ca`5 = 7!  
FY[ i` ]Yfi b[ gUi ggW\i gg'Z0f': ]bUb`nX]Ybgh`Y]ghi b[ Yb  
j cf[ YgW\`U[ Yb`i bX`9bXY`C`\_hcVYf`j YfUVgW\]YXYh`k i fXYb``8]Y  
5: G5`\_ca a Ybh]YfhY`X]Y`Y`bXYfi b[ Yb`i bX`VYhcbhY.

8]Y`@]a ]hg`k YfXYb`ni a`GW\i hn`XYf`⇒hYfYggYb`j cb  
Df]j UhUb`Y[ Yfb`Y]b[ YZ0\ fhž`XU`HfUbgU\_h]cbYb`a ]h`X][ ]hU`Yb  
5ggYhg`a ]h`\c\Yb`F ]g]\_Yb`V]g`\]b`ni a`j c`gh`ÀbX][ Yb  
J Yf`i gh`XYg`Y]b[ YgYhn`hYb`? Ud]hU`g`j YfVi bXYb`g]bX"

8]Y'6Y\0fXY`\Uh`nk Y];`fYbnk YfhY`Y]b[ YZ0\ fh`C\`bY'6Ygh`Àh][ i b[  
]\fYg`9]b`ca a Ybg`i bX`J Yfa 0[ Ybg`X0fZYb`?`Y]bUb`Y[ Yf`V]g`ni  
%"\$\$\$'I G!8c``Uf'dfc`A cbUh']b'? fmdhc k À\fi b[ `Yfk YfVYb``K Ybb

g]Y'a Y\f'7c]bg'\_Ui ZYb'a ØW'hYbž'a ØggYb'g]Y'\f'9]b\_ca a Yb'i bX  
]\f'JYfa Ø[ Yb'Ub[ YVYb" ð'X]YgYa ' : U''\_ØbbYb'X]Y'b]W'h  
dfcZYgg]cbY''Yb'5b`Y[ Yf'V]g'ni ' %\$'i ' ]\fYg' ð\ fYgY]b\_ca a Ybg  
cXYf') 'i ' ]\fYg'JYfa Ø[ Ybg'Ui g[ YVYbž'YXcW' b]W'h'a Y\f'U`g  
%\$\$"\$\$\$'i G!8c`Uf"

...

8]Y'5: G5'ghY`hY'ZYfbYf'ZYghž'XUgg'Y]b': U\fd`Ub'ZØf'X]Y  
9bhk ]W`i b[ 'XYg'? fmdhca Uf\_hYg']b' ? UgUW ghUb'k i fXY  
[ YbY\ a ] [ hi bX'X]Y'6Y\ØfXY'i bhYfb]a a h'bi b'GWf]hYž'i a 'Yg'V]g  
&\$&&'i a ni gYhnYb" '9]b'D]'chdfc'Y\_h'ni f'9fØZbi b[ 'j cb  
'fmdhck Å\fi b[ gVØfgYb'Ua ' : ]bUbnd`Uhn'XYf'<Ui dhghUXh'k ]fX  
[ Y[ Yb'9bXY'X]YgYg' ð\ fYg[ YghUfhYhž'hY]hYb'6YUa hY'a ]hi bX  
ZØ\fhYb'Ui g.

-a '@Ui ZY'XYg' ð\ fYg' &\$&&'k YfXYb'?'fmdhc!6ØfgYb']a  
HYgha cXi g'VYhf]YVYb" '5a '9bXY'XYg'D]'chdfc'Y\_hg'k YfXYb  
[ Y[ YVYbYbZU`g'YbXYfi b[ Yb'XYf'bUh]cbU`Yb  
' ; YgYhn[ YVi b[ 'gck ]Y'XYf'5 ÷ 7! ; YgYhnY'j cf[ Ybca a Yb"

@Ui hi5fa Ub'? cbi g\ dUYj žJ ]nYdfÅg]XYbh'XYf'6`cW\_WU]b\_n  
5ggcW]Uh]cb'cZ'8Yj Y`cdYfg'UbX' l gYfg'cZ'6`cW\_WU]b'HYW'bc`c[ mž  
]gh'Yg'Y]bY' [ `cVU`Y'DfUI ]gž'b]W'h'dfcZYgg]cbY''Yb' ðj Yghc'fYb  
' ; fYbnYb'Ui Zni Yf'Y[ Yb" '8]Y'6YgW'fÅb\_i b[ Yb'k YfXYb'g]Y'j cf  
Z]bUb'n]Y''Yb'JYf'i ghYb'VY]' ðj Ygh]h]cbYb' ]b'?'fmdhck Å\fi b[  
gW'ØhnYbž'Y]bgW' ]Y» `]W' j YfgW' ]YXYbYf'6Yhfi [ ggW'Ya UhUž'ZØ[ hY  
Yf`\]bni "

? cbi g\ dUYj 'VYa Yf\_hY'YXcW'Ui W'ž'XUgg'Yg'ZØf'Df]j UhUb`Y[ Yf  
Y]b][ Y'A Ø[ `]W\_Y]hYb'[ ]Vhž'? fmdhck Å\fi b[ Yb'Ui » Yf\U`V'XYf  
Ui hc'f]g]YfhYb'6ØfgYb']a '5ghUbU' ðhYfbUh]cbU': ]bUbW]U`7YbhfY'ni  
\_Ui ZYb'i bX'ni 'j Yf\_Ui ZYb" '8YU`g'\_ØbbYb'VY]gd]Y`gk Y]gY'ØVYf  
HY`Y[ fUa !? Ub`Å`Y'i bX'K \UhgUdd!7\Uhg'cXYf'ØVYf'XYnYbhfU`Y  
<UbXY`gd`UhhZcfa Yb'j YfY]bVUfh'k YfXYbž'Yf'\_ÅfhY'Yf"

9fk UfhYb 'G]Yž'XUgg '? UgUW ghUb 'Y]bYb 'Z'cf]YfYbXYb  
? fmdhck À\fi b[ ga Uf\_h'Ybhk ]W\_Y'h3'GU[ Yb 'G]Y'Yg'i bg'ja  
? ca a YbhUfVYfY]W 'i bhYb''

6]'XbUW k Y]gY. 'G\i hhYfghcW\_ž'D]l UVUmž'K ]\_]7ca a cbg

f[ bWh]cbfXž'gž']XŁ'o j Uf'gž'Z'g'1 'X"[ Yh9`Ya Ybhg6mHU[ BUa YfgŁQ\$Q'  
]Z'fK"[ Yh9`Ya Ybh6mXf]XŁ'fYhi fb/'g'1 'X"WfYUhY9`Ya YbhfgŁ/'g"]X'1  
]X/'g"gfW "hhdg. #AŁcbbYWh"ZUWVcc\_"bYh#bSl G#gX\_"g. l ZVa `1 %/  
j Yfg]cb1 j ' "&"/Z'g"dUfYbhBcXY"]bgYfh6YZcfYf'gž'Z'gŁ/'qfKcW a Ybhž  
fgWf]dhfž'fZUWVcc\_! 'ggX\_fŁŁ/

8YhU]'g

6Ygi W Yb 'G]Y 'i bg'Ui Z. '\_fmdhc!bYk g"Uh