

K]`XYfg'j Yf`Aggh'?cU`]h]cb.'l `h]a Uhi a 'ZØf : `ØW\h`]b[gdc`]h]_'gcf[h'ZØf'7\Ucg°

; YYfh'K]`XYfg'_ØbX][h'XYb'5i ghf]hh'XYf'DJJ'Ui g'XYf ?cU`]h]cb'Ubž'ZcfXYfh'ghfYb[Y'5gm`a U» bU\a Yb'i bX'ghÒ» h'Ui Z K]XYfghUbX"



B]YXYf`UbXY'!; YYfh'K]'XYfgž'XYf'J cfg]hnYbXY'XYf
b]YXYf`ÀbX]gWXYb': fY]\Y]hgdUfhY] 'fDJJŁž'\Uh'\Yi hY'XYb'FØW_ni [
gY]bYf'DUfhY]'Ui g'XYf'J]Yf!DUfhY]Yb!?cU']h]cb'VY_Ubbh'[Y[YVYb"
8]Yg'[YgWXU\'j]U' L 'fY\Ya U'g'Hk]hhYfŁž'k c'Yf'X]Y']a a YbgYb
8]ZZYfYbnYb']b'XYf'A][fUh]cbgdc`]h]_'U'g'<Ui dh[fi bX'Ub[]Vh"8]Y
DJJ'k Uf'a]h''+'jcb', 'FY[]Yfi b[gg]hnYb'X]Y'ghÀf_ghY'?fUZh']b'XYf
?cU']h]cbž'X]Y'Ui WX'X]Y'DUfhY]Yb'JJ8ž'BG7'i bX'666'i a ZUgghY''
DfYa]Yf'8]W_'GWXccZž'XYf'dUfhY]`cg']ghž'ZØ\fh'X]YgY'?cU']h]cbž'X]Y
bi b'bUWX'_bUdd'Y'Z'A cbUhYb'[YgWXY]hYfh']ghž'c\bY'[fÒ*YfY
DfcV'YaY'[Y'Ògh'ni '\UVYbž'k]Y'Yhk U']b'XYf'A]YhdfY]gVfYagY'cXYf
XYf'Gh]W_ghcZZdfcV'YaUh]_"'K]'XYfg'\UhhY'VYfY]hg'Ub[YXYi hYhž
XUgg'X]Y'DJJ'X]Y'?cU']h]cb'j Yf'UggYb'k ØfXYž'gc'`hY'XYf'; fc*hY]`
gY]bYf': 'ØWXh']b[gd'ÀbY'b]WXh'U_nYdh]Yfh'k YfXYbž'i bX'Ua

8]YbghU['_Ua 'Yg'ni f'YbX[Ø`h][Yb'6YghÀh][ib['XYg'5ighf]hhgžbUWXXYa 'Yf'la ZfU[YXUhYb'jYfÒZZYbh`]WXh'\UhhYž'X]Y'gY]bYDcg]h]cbYb'ghØhnhYb"

K]`XYfg::cfXYfib[Yb']a 'FU\a Yb'gY]bYf'5gm`dc`]h]_'g]bX
XfUgh]gW."'9f'j Yf`Ub[h'X]Y'5i gk Y]gi b['U``Yf'gmf]gW.Yb': `ØW.h`]b[Y]bbYf\U`V'j cb'gYW.g'A cbUhYb'i bX'ZcfXYfh'X]Y'GW.`]Y» i b['XYf; fYbnYb'ZØf'U``Y'5gm`VYk YfVYf"'Ni XYa 'a ÒW.hY'Yf'XYb'9]bgUhn
XYf'5fa YY'ni f'8i fW.gYhni b['X]YgYf'A U» bU\a Yb"'K Y]hYfY'Di b_hY
i a ZUggYb'Y]bYb'Ghcdd'XYf'9fÒZZbi b['bYi Yf': `ØW.h`]b[gnYbhfYb
gck]Y'XUg'5i ggYhnYb'U``Yf'JYfZU\fYb'ni f
: Ua]`]Ybni gUa a YbZØ\fi b["'5gm`VYk YfVYf'gc``Yb'`YX][`]W.'Y]bYb
5i ZYbh\U`h'j cb'a UI]a U``nk Y]`K cW.Yb'Yf\U`hYb"'8]Y'j cb'XYf'DJ J
[YghY``hY'5gm`a]b]ghYf]b'A Uf'c`Y]b': UVYf'\UhhY'nk Uf'VYfY]hg'D`AbY
dfÀgYbh]Yfhz'X]Y'Y]bY'; fYbngW.`]Y» i b['i bX'9]bgW.fÅb_i b[Yb
VY]a ': Ua]`]YbbUW.ni ['VY]b\U`hYhYbz'X]YgY'gh]Y» Yb'YXcW.'Ui Z
Yf\YV`]WXYb'K [XYfqhUbX']bbYf\U`V'XYf'?cU`]h]cb"

$=bghUV]^]hAh'XYf'?cU^]h]cb$

 $8]Y'?cU']h]cb'k Uf'j cb'5bZUb['Ub'j cb'+bghUV]']hÀh'[YdfÀ[h''8]Y BG7'Ài <math>\Rightarrow$ YfhY'g]W\ 'g_Ydh]gW\ '\]bg]W\ h']W\ 'XYf'J YfZUggi b[ghfYi Y XYf'DJ J ž'i bX'Yg'[UV'ni bY\a YbX'?f]h]_'Ub'A]b]ghYf]b': UVYfž'X]Y U'g']b_ca dYhYbh'k U\f[Ybca a Yb'k i fXY'''8]YgY'?cbZ]_hY'hfi [Yb'ni f'9g_U'Uh]cb'XYf'G]hi Uh]cb'VY]ž'U'g'K]'XYfg'Y]bYb'NY\b!Di b_hY!D'Ub'ni f'5gm'dc']h]_'j cf'Y[hYž'XYb'A]'`]cbYb'B]YXYf'ÀbXYf Yfk UfhYhYb''8]Y'?cU']h]cbgdUfhbYf'k UfYb''YxcW\ 'g_Ydh]gW\ [Y[YbØVYf'gY]bYb': cfXYfi b[Yb'i bX'XYb'J cfgW\ 'A[Ybž'X]Y'U'g \UbXk Yf_']W\ 'gW\ 'YW\h_f]h]g]Yfh'k i fXYb''8YfFUUX'j Ub'GhUhY ghY``hY'ni XYa 'ZYghž'XUgg': UVYfg'5bgÀhnY'b]W\ h'Xi fW\ gYhnVUf gY]Yb''8]YgY'GdUbbi b[Yb'ZØ\fhYb'ni 'Y]bYa 'I `h]a Uhi a 'j cb K]'XYfgž'_i fn'VYj cf'k]W\ h][Y'?cU`]h]cbgVYfUhi b[Yb'ghUhhZ]bXYb qc``hYb''

Dc`]h]gWXY Ni _i bZh

 $BUWX `XYa `[YgWXY]hYfhYb `6ØbXb]g `]gh'i b_`Ufž'k]Y `Yg `dc`]h]gWXk Y]hYf[Y\h" `9]bY `A]bXYf\Y]hgfY[]Yfi b[`c\bY `X]Y `DJJ `]gh$

8YhU]`g	
J cfZU``	Gcbgh][Yg
Cfh	B]YXYf`UbXY
EiY``Yb	• k k k "i bgYf!a]hhY`Yi fcdU"Wca
	YII dfYgg"Uh
	• k k k "gi YXXYi hgW\Y"XY

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