

FY]gYk U\bg]bb bUW\ BcfXYfbYm I f`Ui VYf'_Aa dZYb a]h'Ni [!i bX : A\fdfcV`Ya Yb°

FY]gYVYf]WXh. I f`Ui VYf`Ui Z'BcfXYfbYm'_Àa dZYb'a]h Ni [j YfgdÀhi b[Yb'i bX': À\fj YfV]bXi b[Yb"'H]ddg'ni f'5bfY]gY i bX'5_h]j]hÀhYb'Ui Z'XYf'∌gY`"



BcfXYfbYmž'8Yi hgWX`UbX`!; YfUXY`X]Y`JcfZfYi XY`Ui Z`Y]bYb
I f`Ui V`Ui Z`BcfXYfbYm_Ubb`gWXbY``Xi fWX`i bYfk UfhYhY
FY]gYdfcV`Ya Y`[YhfØVh`k YfXYb"`5_hi Y```VYf]WXhYh`a c]b"XY`j cb
Y]bYf`I f`Ui VYf]bž`X]Y`Ua `GcbbhU[`a]h`XYf`8Yi hgWXYb`6U\b`bUWX
BcfXXY]WX`fY]gYb`a ÒWXhYž`i a `UbgWX`]Y» YbX`X]Y`: À\fY`ni f
VY`]YVhYb`cghZf]Yg]gWXYb`\DgY``ni `bY\aYb"`\DgYf[Ub[YbYb`\J\f\UhhY`g]Y`Y]bY`U``Yg`UbXYfY`U`g`YbhgdUbbhY`5bfY]gY.`\DfY`Bcbghcd!
JYfV]bXi b[`j cb`: fUb_Zi fh`bUWX`BcfXXY]WX`k i fXY`j cb`GhÒfi b[Yb
Xi fWX_fYi nhž`gcXUgg`g]Y`Ua `9bXY`j]Yfa U``i a ghY][Yb`a i gghY`i bX
X]Y`FY]gY`j cb`[Yd`UbhYb`gYWXg`Ghi bXYb`Ui Z`bYi b`Ghi bXYb
Ui g[YXY\bh`k i fXY"`\DfY`YfghY`?`UggY!6i WXi b[``]Y» `g]Y`]a `Gh]WXž

XU'X]Y'5VhY]`Y'j c```k UfYbž'i bX'gc'j YfdUgghY'g]Y'X]Y'`YhnhY': À\fYbUW\'BcfXYfbYm"

± X]YgYa '≯\f'\Uh'X]Y'FY]gYbXY'UV'? Ò'b'[YVi W\hž'nY][h'g]W\'UVYf VYgcf[h'ØVYf'a Ò[`]W\Y'YfbYi hY'DfcV`Ya Y"'±b'Y]bYf': UWVVcc_!; fi ddY'\Uh'g]Y']\fYb'I ba i h'[YÀi »Yfhž'XcW\'X]Y'FØW_a Y`Xi b[Yb k UfYb'k Yb]['Ui Za i bhYfbX"'J]Y`Y'FY]gYbXY'VYf]W\hYb'j cb Å\b`]W\Yb'9fZU\fi b[Ybž'XUfi bhYf'JYfgdÀhi b[Yb'i bX'Ni [Ui gZÀ``Y" 9]b'k Yfhj c``Yf'H]dd'XYf'YfZU\fYbYb'I f`Ui VYf'`Ui hYhž'gc'ZfØ\'k]Y a Ò[`]W\'ni 'ghUfhYbž'i a 'Yhk U][Y'?ca d`]_Uh]cbYb'fYW\hnY]h][Y]bd`UbYb'ni '_ÒbbYb"'Dcg]h]j Yg'[]Vh'Yg'YXcW\'Ui W\'.'9g'YI]gh]YfYb 6Yf]W\hY'j cb'FY]gYbXYbž'XYbYb'Y]bY'fY]Vi b[g`cgY'5bfY]gY VYgW\]YXYb'k Uf"

5VYbhYi Yf'i bX'9f\c\i b['Ui Z'BcfXYfbYm

BcfXYfbYm]gh'k Y]h'ØVYf'X]Y'@UbXYg[fYbnYb'\]bUi g'ZØf'gY]bY
_]bXYfZfYi bX`]W\Yb'5_h]j]hÀhYb'i bX'X]Y'UhYa VYfUi VYbXYb
GUbXghfÀbXY'VY_Ubbh''K]Y'fY[]cbU`"VU\b"XY']bZcfa]Yfhž
_`ObbYb': Ua]`]Yb']a '6i XXY`!'i bX'6i f[Yb`UbX' Gd]Y''c\bY
; fYbnYb '[Yb]Y»Yb'cXYf'g]W\'Ua 'ZUW\Ybž'_`UfYb'K UggYf'XYf
?ØghY'j Yf[bØ[Yb"'AigW\Y`gi W\Y'i bX'XUg'6UXYb']b'XYf'6fUbXi b[ghY\Yb'YVYbgc'\cW\']a '?i fg'k]Y'XYf'6Ygi W\'XYg'Y]bn][Ufh][Yb: Ua]`]Yb!H\U`UggcVUXYgž'XUg'gY]h'gY]bYf'9fOZZbi b[']a '* b]'&\$%&
XUg'YfghY'gY]bYf'5fh']b'8Yi hgW\`UbX']gh''A]h'Y]bYf
K Uhhk i fa fi hgW\Yž'Y]bYf'K UgW\ghfU»Y'i bX'k Y]hYfYb'5hhfU_h]cbYb
`Aggh'Yg'_Y]bY'K ØbgW\Y'cZZYb"

 $: \emptyset f`5VYbhYi Yf`i gh][Y`[]Vh`Yg`ni XYa `XUg`< cW.gY]`[UfhYbUb[YVcha]h`X]fY_hYa `GYYV`]W_ž`XUg`bYi Y`DYfgdY_h]j Yb`Ui Z`X]Y`$\phi gY``i bX XUg`A YYf`Yfa Õ[`]W\h"I bX`k Ybb`X]Y`_`Y]bYb`5VYbhYi fYf`a U``Y]bY DUi gY`VfUi W\Ybž`k UfhYh`XYf`5VYbhYi Yfgd]Y`d`Uhn` ?Ud`< ccfb h\[A][`]W\Ui Z`X]Y`\[A b[Yb'; AghY"`8]Y`A Õ[`]W_Y]hYb`ni f : fY]nY]h[YghU`hi b[`g]bX`U`gc'j]Y`Z\[A`h][ž`k Ug`BcfXYfbYm`ni `Y]bYa dYfZY_h`[YY][bYhYb`N]Y``Z\[Of`: Ua]`]Ybi f`Ui VYf`a UW\h"$

9ffY]WXVUf_Y]hii bX 5bfY]gY

 $: \varnothing f'X]Y\check{z}X]Y'Yg'bcWX'gWXbY``Yf'a \grave{O}[Yb\check{z}'VYghY\backslash h'X]Y'A \grave{O}[\grave{`}]WX_Y]h\check{z}$ $\varnothing VYf'XYb'_`Y]bYb' \Rightarrow bgY`!: \grave{i}[\backslash UZYb'j cb'6fYa Yb'cXYf' < Ua Vi f['ni Z']Y[Yb'cXYf'Y]b'K UggYfhUI]'ni 'WX UfhYfb' 'Ui WX'k Ybb'X]YgY Cdh]cbYb'gck]Y'X]Y'Bi hni b['j cb'A]YhZU\ff\{AXYfb'j cf'Cfh']a JYf[`Y]WX'hYi fYf'Ui gZU``Yb'_\ObbYb'''9g'[]Vh'Ui Z'BcfXYfbYm'Y]bY J]Y`nU\`'Ub'FUXk Y[Yb\check{z}X]Y'X]Y': cfhVYk Y[i b['dfcV`Ya`cg Yfa \grave{O}[`]WXYb'': U\ff\{AXYf'Z\Øf'X]Y'[UbnY': Ua]`]Y'g]bX'YVYbZU``g Yf\{A`h`]WX`z'k \{A\fYbX'Y]b'[i h'cf[Ub]g]YfhYf'\dagYVi g'`\{Ab[YfY GhfYW_Yb'VY]'6YXUfZ'UVXYW_h'''}$

8]Y'JcfZfYi XY'Ui Z'Y]bYb'YbhgdUbbYbXYb'5i ZYbh\U`h'Ui Z BcfXYfbYm'V`Y]Vh'hfchn'XYf'<YfUi gZcfXYfi b[Yb'XYf'5bfY]gY i b[YVfcW\Yb"'K Yf'fYW\hnY]h]['d`Ubhž'_Ubb'X]Y'GW\Òb\Y]h'X]YgYf Y]bn][Ufh][Yb'\DgY`']b'j c``Yb'NØ[Yb'[Yb]Y»Yb'i bX'g]W\'Ui Z'gW\ÒbY 9f]bbYfi b[Yb'ZfYi Yb"

8 YhU]`g	
Cfh	BcfXYfbYmž8YihgWX`UbX
EiY``Yb	• k k k "a c]b"XY
	fY[]cbU`"VU\b"XY
	k k k "ghUXh`UbXhcif"XY