

# GhYd\Ub'GWX]ddYfg'hf]hh'ØVYffUgWXYbX'U`g; YgWXÀZhgZØ\fYf'jcb'6cfigg]U'nifØW\_

GhYd\Ub'GW\]ddYfgž'; YgW\ÀZhgZØ\fYf'j cb'6cfi gg]U A ÒbW\Yb[`UXVUW\ž'hf]hh'ØVYffUgW\YbX'ni fØW\_"'9f'Yf\_`Àfh'X]Y ; fØbXY'i bX'gY]bY'D`ÀbY"

8]Y '9b hg W Y]Xi b[ 'j cb 'GhYd\Ub 'G W ]dd Yfgž'; Yg W À Zhg ZØ\fYf'j cb 6c fi gg]U 'A Ob W Yb[ `UXVUW ž'ni fØ W\_ni hfYhYb ž'k ]f Zh Y]b Yb 'G W UhhYb Ui Z'X]Y 'gd cfh`]W Y 'Ni \_i b Zh XYg 'J YfY]b g " 8 Yf 'F Ø W\_hf]hhž XYf 'Ua '- " 5i [ i gh '& \$ & ( 'V Y\_Ubbh' [ Y [ Y V Y b 'k i f X Y ž'\_Ua 'ZØf'j ]Y `Y ØV Yff Ug W Yb Xž'k Y]` 'Yf 'Y]b Y 'G Ài `Y 'X Yf '6c fi gg]U 'k Uf 'i b X 'g Y]h '& ) \$ \ \J\fYb ']b 'j Yfg W ]Y XY b Yb ': i b\_h]c b Yb 'ZØf 'X Yb 'J YfY]b 'h Àh][ 'k Uf"

### 9]b VYk Y[hYf K YfXY[Ub[

 $GWX ] ddYfg `VY [ \ Ubb `gY ] bY `? \ Uff] YfY `VY ] `6cfi \ gg] U `A \ \grave{O}bWX Yb [ `UXVUWX i bX `Yf `YVhY `nU\ `fY ] WX Y `< \grave{O}\ Yb `i bX `H] Y ZYb ž `XUfi bhYf `5Vgh] Y [ Y `i bX XYb `9] bni [ `]b `X] Y `7 \ Ua d] cbg `@YU [ i Y " `GY ] b `F ØW_hf] hh `ghY \ h `b ] WX h bi f `ZØf Y] bYb `dYfg \grave{O}b `] WX Yb `BYi Ub ZUb [ ž `gcb XYfb `\ ] bhYf `Aggh `Ui WX Y] bY `@ØW_Y ž `X] Y `gWX k Yf `ni `ZØ` `Yb `gY] b `k ] fX"$ 

## GhfUhY[]gWXYD`Ubib[XYg5VgWX]YXg

# 9]b fi \][ Yf 5 VgW ]YX

6YgcbXYfg'Yfk À\bYbgk Yfh']ghž'XUgg'GW\]ddYfg'Yg'gW\UZZhYž'gY]bY D`ÀbY'ZØf'Y]bYb'FØW\_hf]hh'[Y\Y]a 'ni '\U`hYbž'gcXUgg'XYf'JYfY]b']b Fi\Y'Y]bYb'BUW\Zc`[Yf'gi W\Yb'\_cbbhY"'9f'Ài »YfhY'g]W\ Yf`Y]W\hYfh' 9g']gh']b'nk Y]'A cbUhYb'b]W\hg'Ub'X]Y'2 ZZYbh`]W\\_Y]h [Y\_ca a Yb"

#### Gma dUh\]Y ZØf XYb J YfY]b

; YfØW\hY'ØVYf'Y]bYb'K YW\gY``ni 'Y]bYa 'UbXYfYb'JYfY]b'cXYf
JYfVUbX'k]Yg'GW\]ddYfg'YbhgW\]YXYb'ni fØW\_"' A Y]b'?`i Vž'XUg']gh
6cfi gg]U ž'VYhcbhY'Yf'i bX'a UW\hY'XUa ]h'gY]bY'`Ub['À\f][Y
JYfVi bXYb\Y]h'ni a 'JYfY]b'XYi h']W\"'8]Yg'nY][ hž'XUgg'gY]b
FØW\_hf]hh'b]W\h'Xi fW\']bhYfbY'?cbZ]\_hY'cXYf'5b[YVchY'UbXYfYf
7`i Vg'a ch]j ]Yfh'k Ufž'gcbXYfb'Y]b'GW\f]hh'k Ufž'XYb'Yf'gY`Vgh
\_cbhfc``]YfYb'k c``hY'"

# 8]Y'Ni\_i bZh'j cb'6cfi gg]U'A ObWXYb[`UXVUWX

8]Y:: fU[YžX]Y'bi b'j]Y`Y:: Ubg'VYgW\ÀZh][hž']gh'X]Y'\_ØbZh][Y 5i gf]W\hi b['XYg'JYfY]bg'c\bY'GW\]ddYfg"'GY]b'FØW\_hf]hh'\_ÒbbhYgckc\``<YfUi gZcfXYfi b[Yb'U`g'Ui W\'7\UbW'b'ZØf'6cfi gg]U A ÒbW\Yb[`UXVUW\'a]h'g]W\'Vf]b[Yb"'9g'V`Y]Vh'UVni k UfhYbž'k]YXYf'JYfY]b'X]Y'bÀW\ghY'D\UgY'Ub[Y\Yb'k]fX'i bX'cV'g]Y']b'XYf@U[Y'gY]b'k YfXYbž'XYb'YfZc`[fY]W\Yb'?i fgž'XYb'GW\]ddYfg a ]h[YghU`hYh`\Uhž'Zcfhni gYhnYb"

±b 'Y]bYa '[ Ya Y]bgUa Yb '±bhYfj ]Yk 'VYhcbhY 'GW\]ddYfgž'XUgg 'gY]b FØW\_hf]hh 'b]W\ h 'Ui g 'I bgh]a a ][ \_Y]hYb 'fYgi `h]YfhY'' <ÀhhY 'Yg 'Nc ZZ \]bhYf 'XYb '? i `]ggYb '[ Y[ YVYbž'\ÀhhYb 'g]W\ 'Yhnh 'UbXYfY j YfUVgW\]YXYh ž'gU[ hY 'Yf" '8]YgY 'K cfhY '\_ÒbbhYb 'Hfcgh'ZØf'X]Y ': Ubg VYXYi hYbž'X]Y 'GhUV]`]hm i bX 'Y]bY 'dcg]h]j Y '5i gf]W\ hi b[ 'XYg J YfY]bg'k ØbgW\Yb"

GhYd\Ub'GWX]ddYfg'j Yf`Àggh'6cfi gg]U'A ÒbWXYb[`UXVUWX'U`g'Y]bY VYXYi hYbXY'DYfgÒb`]WX\_Y]h'gY]bYf'; YgWX]WXhYž'i bX'Yg'V`Y]Vh'ni  $\label{lem:czybz} $$ \czybz^*XUgg^*gY^]b^*9fVY^]a^*JYfY^]b^*k^*Y^]hYf^*YVh^*i^*bX^*X^]Y^*:^c\lambda^*Yb^*Ui^*Wk^*Jb^*Ni^*_i^*bZh^*X^]Y^*9fZc^*[^*Y^*ZY^]Yfb^*_ObbYbz^*X^]Y^*g]Y^*i^*bhYf^*gY^]bYf^*:^0\lambda^*i^*b[^*Yf^*Ub[^*h^*\lambda UVYb'']$ 

8 Y hU]`g

6Ygi WXYb G]Y i bg Ui Z b!U[ "XY