

# =bbcjUh]cbgdfY]gAcXYfbY @UbXk]fhgWXUZh&\$&(.GUgWXU@cVcibX bYiYisfmVf]b[YbZf]gWXYbK]bX



# @UbXk]fhgWXUZh

"8 Ug": cfi a "A cXYfbY "@UbXk ]fhgWk UZh'fl A @Ł'i bX'hcd'U[ fUf a ÒWk hYb'Ui Wk ']b'X]YgYa "₺\f']bbcj Uh]j Y'Dfc'Y\_hY'i bX bUWk\U`h][ Y'`UbXk ]fhgWk UZh`]Wk Y'6Yhf]YVY'Ui gnY]Wk bYb"'8Yf ₺bcj Uh]cbgdfY]g'gc``'X]Y'₺bcj Uh]cbg\_fUZh'XYf'XYi hgWk Yb @UbXk ]fhgWk UZh'ZÒfXYfb'i bX'g]Wk hVUf'a UWk Yb"'6]g'ni a '&\$" GYdhYa VYf'&\$&('\_ObbYb'g]Wk'GhUfh!i dgž'l bhYfbY\a Ybž: cfgWki b[ gY]bf]Wk hi b[ Ybž'l b]j Yfg]hÀhYb'i bX'J YfVÀbXY VYk YfVYb"'8]Y'Y]b[ YfY]Wk hYb'@Ògi b[ Yb'gc``Yb'VYfY]hg'Ui Z`UbXk ]fhgWk UZh`]Wk Yb'6Yhf]YVYb'[ YhYghYh'i bX#cXYf']a '9]bgUhn gY]bž'i a 'XYf'@UbXk ]fhgWk UZh'Y]bYb'YWk hYb'A Y\fk Yfh'ni 'V]YhYb"

#### ~GcbXYfdfY]g~ZØf~fY[YbYfUh]jY~@UbXk]fhgWXUZh

± X]YgYa '\*J\f`k ]fX'bYVYb'XYf' < Ui dh\_UhY[cf]Y'Ui WX'XYf GcbXYfdfY]g' fY[YbYfUh]j Y'@UbXk ]fhgWXUZh 'j Yf[YVYb"'8]YgYf f]WX hYh'g]WX'gdYn]Y``'Ub'@UbXk ]fh]bbYb'i bX'@UbXk ]fhYž'X]Y ]bbcj Uh]j Y'?cbnYdhY']a '6YfY]WX'XYf'fY[YbYfUh]j Yb @UbXk ]fhgWXUZh'j cfghY``Yb'a ÒWXhYb"'8Yf'GcbXYfdfY]g']gh'a ]h Y]bYa 'DfY]g[Y`X'j cb') "\$\$\$ 'gck ]Y'?ca a i b]\_Uh]cbga U» bU\a Yb i bX'k Y]hYfYb'DfY]gYb'Xch]Yfh"

## ~GUgWW U~@cVc~]b~XYf~xifm

GUgWXU'@cVcžY]b'9I dYfhY'ZØf'8][]hU`]g]Yfi b[ž'k]fX']b'X]YgYa '\\f\f\HY]`'XYf'\cWX\_UfÀh][Yb'\rightarrow fm'gY]b"'5i WX'A Uf]Y'j cb'@UbXYbVYf[jcb'XYf'`UbXk]fhgWXUZh`]WXYb'FYbhYbVUb\_'i bX'@]U'7Uf`i WW]'j ca: ccX'7Ua di g'6Yf`]b'k i fXYb'U`g'bYi Y'\rightarrow fma]h[`]YXYf'[Yk cbbYb"; Ya Y]bgUa 'a ]h'UbXYfYb'9I dYfh]bbYb'i bX'9I dYfhYb'k YfXYb'g]YX]Y']bbcj Uh]j Yb'Dfc'Y\_hY'VYk YfhYb'i bX'X]Y'; Yk ]bbYf]bbYb'i bX; Yk ]bbYf'XYg'\danger bcj Uh]cbgdfY]gYg'Yfa ]hhY`b"

## "Cb`]bY!7ca a i b]hm'\_Ubb UVgh]a a Yb

BYVYb`XYa '\(\forall \) fmj YfZU\fYb`\_\(\O\)b\Yb`Ui W\\`X]Y`A ]h[\`]YXYf`XYf`C b\`]b\Y!
7 ca a i b]hm'j cb`hcd`U[fUf`i bX`XYa ': A @'\(\O\)VYf`X]Y`Y]b[YfY]W\\hYb
Dfc \(\Gamma\_h\)Y`UVgh]a a \(\Yb''\)8]Y`DfY]ghf\(\A\)[Yf]b\Yb`i bX`DfY]ghf\(\A\)[Yf

Yf\U`hYb`Y]b`DfY]g[Y`X`jcb`V]g`ni`%\$"\$\$\$ `gck]Y`kY]hYfY`DfY]gY" 8]Y`DfY]gjYf`Y]\ib[`Z]bXYh`Ua`&\$"`\*JbiUf`&\$&)`]a`FU\aYb`XYf ;fØbYb`KcWXY`]b`6Yf`]b`ghUhh"

"@UbXk]fhgWkUZh`]WkYʻ=bbcjUh]cbYbʻg]WkhVUfʻaUWkYb

8 Yfʻ=bbcjUh]cbgdfY]gʻAcXYfbYʻ@UbXk]fhgWkUZh`\UhʻXUgʻN]Y`žʻX]Y

]bbcjUh]j YbʻDfcY\_hYʻibX`=XYYbʻUigʻXYfʻ@UbXk]fhgWkUZhʻghÀf\_Yf

g]WkhVUfʻniʻaUWkYb"·8]Yʻ@UbXk]fhgWkUZhʻnÀ\`h'niʻXYb

]bbcjUh]j ghYbʻ6fUbWkYbžʻYXcWkʻg]bXʻj]Y`Yʻ=bbcjUh]cbYbʻXYf

VfY]hYbʻ²ZZYbh`]Wk\_Y]hʻb]WkhʻVY\_Ubbh'ʻA]hʻXYaʻ=bbcjUh]cbgdfY]g

gc``YbʻX]YgYʻ[fc»Ufh][YbʻDfcY\_hYʻY]bYʻD`UhhZcfaʻYf\U`hYbʻibX`X]Y

@UbXk]fhgWkUZhjjcbʻacf[YbʻjcfUbVf]b[Yb"

K Y]hYfY ⊕ Zcfa Uh]cbYb ni a '⊕bcj Uh]cbgdfY]g'A cXYfbY @UbXk ]fhgWXUZh'Z]bXYb'G]Y'i bhYf. ']bbcj Uh]cbgdfY]g! `UbXk ]fhgWXUZh"XY

. .

8 Y hU]`q

6Ygi WXYb G]Y i bg Ui Z. a Y]b!VYf`]b bYh