

59; fci d']a 'K UbXY`. 'GUb]Yfi b['i bX bYi Y'K Y[Y'ni f'DfcZ]hUV]`]hÀh

59'; fci d'a Y`XYh' ≠bgc`j Ybn'Ui Z[fi bX'j cb'DfY]gUbgh]Y[YbibX'BUW\ZfU[YfØW_[Ub["'5`i hYW\'<c`X]b['ØVYfb]a a hii bX d`Ubh'GUb]Yfi b["

< YfUi gZcfXYfi b[Yb]b XYf 5i hca cV]`ni `]YZYf]bXi ghf]Y</pre>

#D'XYf'5i hca cV]`VfUbWXY'_ca a h'Yg'XYfnY]h'ni 'VYXYi hYbXYb
J YfÀbXYfi b[Ybž'X]Y'b]WX h'bi f'X]Y'[fc >> Yb' < YfghY``Yfž'gcbXYfb
]bgVYgcbXYfY'X]Y'Ni `]YZYfYf']b'Y]bY'gWX k]Yf][Y'@U[Y'Vf]b[Yb"'8]Y
59'; fci dž'Y]b'VYXYi hYbXYf'5_hYi f']b'XYf'Ni `]YZYf]bXi ghf]Yž'ghY\h
Ub[Yg]WX hg'ghY][YbXYf'? cghYb'i bX'Y]bYf'g]b_YbXYb'B UWXZfU[Y
j cf'Yfbgh\UZhYb' < YfUi gZcfXYfi b[Yb"</pre>

8]Y'Fc``Y'XYf'59'; fci d']b'XYf'6fUbWXY

\sqrt{y} VYfbU\a Y'Xi fW\5`i hYW\< c`X]b[

5bZUb['&\$&('ØVYfbU\a 'XUg'I bhYfbY\a Yb'5`i hYW\'<c`X]b['X]Y 59; fci d"5`i hYW\'<c`X]b['\Uh'g]W\'Ui Za]hhY`ghÀbX]gW\Y I bhYfbY\a Yb'gdYn]U`]g]Yfhž'X]Y'g]W\']b'GcbXYfg]hi Uh]cbYb VYZ]bXYb"'79C'7\f]gh]Ub'?`Y]b'I\b['jcb'5`i hYW\'<c`X]b[_ca a Ybh]YfhY'X]Y', VYfbU\a Y.'8]Y'5i Z[UVY']ghž'X]Y'59'; fci d k]YXYf'bUW\\U`h]['dfcZ]hUVY`'Ui Zni ghY``Yb" '8]YgY'A U» bU\a Y k]fX'U`g'ghfUhY[]gW\Yf'GW\f]hh'Ub[YgY\Ybži a 'XUg', VYf`YVYb'i bX X]Y'`Ub[Zf]gh][Y'GhUV]`]hÀh'XYf'59'; fci d']b'Y]bYa 'g]W\ j YfÀbXYfbXYb'A Uf_hi a ZY`X'ni 'q]W\Yfb"

9]b $F \varnothing W$ [Ub [XY f B UW Z f U [Y U g <] b X Y f b] g

 $\label{thm:thm:tyfideghj} Hfc hn: XYfideghj Yb: GWX f] hhY: ni fiGUb] Yfi b[:V`Y] Vh: XYfiFØW_[Ub[XYfiBUWX ZfU[Y:gY] hYbg: XYfi5i hcacV]`\YfghY``YfiY] bY: VYXYi hYbXY < YfUi gZcfXYfi b[:"8] YgY: 9bhk]W_`i b[:nY][h:Y] bYb: VfY] hYfyb: HfYbX] b: XYfi \div Xi ghf] Yž: XYfiUi Z:X] YiI bg] WXYf\Y] hYb:]b: XYfi[`cVU`YbK] fhgWX UZhini fØW_ni ZØ\fYb:]gh":8Yfi9] bZi gg: XYfi\div ZUh] cb: i bX hYi fYfiFc\ghc ZZY:\Uhib] WXhibi fiX] Yi59; fci dž: gcb XYfb: nU\`fY] WXYNi`] YZYfYfi] b: GWX] YZU[Y:[YVfUWXhz:kUg:]b: XYfi6fUbWXY: XYfnY] hini VYcVUWX hYb:]gh"$

5i gk]f_i b[Yb 'Ui Z'X]Y'; Ya Y]bgW UZh

8]Y'DfcV'Ya Y'XYf'59; fci d'\UVYb'Ui W\'X]fY_hY'5i gk]f_i b[Yb Ui Z'X]Y'`c_U`Y'; Ya Y]bgW\UZh"'5fVY]hgd`ÀhnY'i bX'k]fhgW\UZh`]W\Y GhUV]`]hÀh'\Àb[Yb'cZh'j cb'XYf'@Y]ghi b[gZÀ\][_Y]h'gc`W\Yf I bhYfbY\a Yb'UV"'8]Y'Ub\U`hYbXYb'GW\k]Yf][_Y]hYb']b'XYf 5i hca cV]`ni `]YZYf]bXi ghf]Y'_ÒbbhYb'gca]h'Ui W\'XUg k]fhgW\UZh`]W\Y'K c\``XYf'FY[]cb'VYY]bhfÀW\h][Yb"

: Un]h. 5bdUggi b['U`g'GW\ `ØggY` ni f'Ni _i bZh

8]Y 59; fci dži bhYfbYi Yf: Ø\fi b[žghY\hj cf'XYf < YfUi gZcfXYfi b[žg]W\ 'Ub'X]Y 'U_hi Y``Y'A Uf_h`U[Y'Ubni dUggYb'i bX dchYbn]Y``Y'7\UbW\b'ni 'bi hnYb"'8Yf: c_i g'Ui Z'bUW\\U`h][Y DfcZ]hUV]`]hÀh'_ÒbbhY']b'XYf'Ni _i bZh'YbhgW\Y]XYbX'gY]bži a gck c\``XUg'I bhYfbY\a Yb'U`g'Ui W\'X]Y'XUa]h'j YfVi bXYbYb

 $5 \text{ fVY } [\text{hgd `AhnY'ni 'g}] \text{W.Y fb'i bX'XYb'K Y } [\text{'ZØf'Y }] \text{bY'ghUV }] \text{`YfY } \\ \text{k } [\text{fhgW.UZh'}] \text{W.Y'@U } [\text{Y'}] \text{b'XYf'FY } [\text{]cb'ni 'YVbYb''}$

8 YhU]`g

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