

$$\begin{array}{ccc}
 \mathrm{Hom}_{\mathbf{C}}(X; Y) \otimes \mathrm{Hom}_{\mathbf{C}}(Y; Y) & \xrightarrow{m_{X, Y, Y}} & \mathrm{Hom}_{\mathbf{C}}(X; Y) \\
 \mathrm{Id}_{\mathrm{Hom}_{\mathbf{C}}(X; Y)} \otimes j_Y \uparrow & \nearrow \scriptstyle \mathrm{ru} & \xleftarrow{m_{X, X, Y}} \mathrm{Hom}_{\mathbf{C}}(X; X) \otimes \mathrm{Hom}_{\mathbf{C}}(X; Y) \\
 \mathrm{Hom}_{\mathbf{C}}(X; Y) \otimes 1 & & \nwarrow \scriptstyle \mathrm{lu} \\
 & & 1 \otimes \mathrm{Hom}_{\mathbf{C}}(X; Y) \xleftarrow{j_X \otimes \mathrm{Id}_{\mathrm{Hom}_{\mathbf{C}}(X; Y)}}
 \end{array}$$