

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