

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