

$$\begin{array}{ccc}
 (X \otimes 1) \otimes Y & \xrightarrow{\text{as}_{X,1,Y}} & X \otimes (1 \otimes Y) \\
 \searrow \text{ru}_X \otimes \text{Id}_Y & & \swarrow \text{Id}_X \otimes \text{lu}_Y \\
 & X \otimes Y &
 \end{array}$$