

$$(\mathrm{Id}_{\textcolor{red}{V}} * \textcolor{violet}{\otimes} \eta_{\textcolor{red}{V}}) \circ (\epsilon_{\textcolor{red}{V}} \textcolor{violet}{\otimes} \mathrm{Id}_{\textcolor{red}{V}} *) = \mathrm{Id}_{\textcolor{red}{V}} *$$