

$$\begin{array}{ccc}
 A & \xrightarrow{\eta_A} & TA \\
 \text{id}_A \downarrow & & \text{id}_{TA} = T(\text{id}_A) \downarrow \\
 A & \xrightarrow{\eta_A} & TA \\
 \eta_A \downarrow & & \eta_{TA} \downarrow \\
 TA & \xrightarrow{T(\eta_A)} & T(TA)
 \end{array}$$