

$$\begin{aligned} \mathbb{J} &\in \nabla \mathbb{K} \\ \mathbb{J} &\xrightarrow[\text{lin}]{\mu} \mathbb{J} \boxtimes \mathbb{J} \\ \mathbb{J} &\xrightarrow[\text{lin}]{e} \mathbb{K} \end{aligned}$$

$$\begin{array}{ccc} \mathbb{J} \boxtimes \mathbb{J} & \xleftarrow{\mu \boxtimes i} & \widehat{\mathbb{J} \boxtimes \mathbb{J}} \boxtimes \mathbb{J} \\ \downarrow \mu & & \downarrow i \boxtimes \mu \\ \mathbb{J} & \xleftarrow{\mu} & \mathbb{J} \boxtimes \mathbb{J} \end{array}$$

$$\begin{aligned} \Downarrow \boxtimes \boxtimes & \stackrel{\text{assoc}}{=} \Downarrow \boxtimes \boxtimes \\ e \Downarrow & = \Downarrow = \Downarrow e \end{aligned}$$

$$\begin{array}{ccc} \mathbb{J} \boxtimes \mathbb{J} & & \\ \downarrow \mu & \swarrow i \boxtimes e & \\ \mathbb{J} & & \mathbb{J} \boxtimes \mathbb{K} \\ & \searrow i \boxtimes 1 & \\ & & \mathbb{J} \end{array}$$

$$\begin{array}{ccc} \mathbb{J} \boxtimes \mathbb{J} & & \\ \downarrow \mu & \swarrow e \boxtimes i & \\ \mathbb{J} & & \mathbb{K} \boxtimes \mathbb{J} \\ & \searrow 1 \boxtimes i & \\ & & \mathbb{K} \end{array}$$

$$\begin{aligned} \mu \underline{\mu \boxtimes i} &= \mu(i \boxtimes \mu) \\ \mu i \boxtimes e &= i \boxtimes 1 \\ \mu e \boxtimes i &= 1 \boxtimes i \end{aligned}$$