

Step 1

$$\begin{array}{ccccc}
 S^0 & \xrightarrow{\lambda_{S^0}^{\text{Sets}_*, -1}} & S^0 \wedge S^0 & \xrightarrow{\text{id}_{\text{Sets}_*|S^0, S^0}^{\otimes, -1}} & S^0 \otimes_{\text{Sets}_*} S^0 \\
 \downarrow [x] & & \downarrow \text{id}_{S^0} \wedge [x] & \downarrow \text{id}_{S^0} \otimes_{\text{Sets}_*} [x] & \downarrow \text{id}_{\mathbb{1}_{\text{Sets}_*}} \wedge [x] \\
 S^0 & \xrightarrow{\lambda_{S^0}'^{-1}} & \mathbb{1}_{\text{Sets}_*} \otimes_{\text{Sets}_*} S^0 & & \\
 & (1) & & (4) & \\
 & (5) & & & \\
 X & \xrightarrow{\lambda_X^{\text{Sets}_*, -1}} & S^0 \wedge X & \xrightarrow{\text{id}_{\text{Sets}_*|S^0, X}^{\otimes, -1}} & S^0 \otimes_{\text{Sets}_*} X \\
 & & \downarrow \text{id}_{S^0} \wedge [x] & \downarrow \text{id}_{S^0} \otimes_{\text{Sets}_*} [x] & \downarrow \text{id}_{\mathbb{1}_{\text{Sets}_*}} \wedge [x] \\
 X & \xrightarrow{\lambda_X}'^{-1} & \mathbb{1}_{\text{Sets}_*} \otimes_{\text{Sets}_*} X & &
 \end{array}$$

(3) (2) (1) (4) (5)