$$A_{1} \xrightarrow{f_{A}} \xrightarrow{g_{A}} \xrightarrow{g_{A}} \xrightarrow{\delta_{A}}$$

$$B_{1} \xrightarrow{f_{B}} \xrightarrow{i_{2}} \xrightarrow{g_{B}} \xrightarrow{i_{3}} \xrightarrow{\delta_{B}}$$

$$\downarrow p_{2} \qquad \downarrow p_{3}$$

$$\downarrow p_{2} \qquad \downarrow p_{3}$$

$$\downarrow C_{2} \qquad \downarrow \varepsilon_{3}$$

$$\downarrow \varepsilon_{2} \qquad \downarrow \varepsilon_{3}$$