

$$\begin{array}{ccc}
 (A, B) & \xrightarrow{i} & \Delta(A \amalg B) \\
 & \searrow j & \downarrow \Delta(h) \\
 & & \Delta(C)
 \end{array}
 \qquad
 \begin{array}{ccc}
 & & A \amalg B \\
 & & \downarrow h \\
 & & C
 \end{array}$$