

$$\begin{array}{ccccc}
 A & & G(A) & \xrightarrow{i_A} & F(A) \\
 \downarrow f & & \downarrow F(f)|_{G(A)} \downarrow G(f) & & \downarrow F(f) \\
 B & & G(B) & \xrightarrow{i_B} & F(B)
 \end{array}$$