

$$\begin{array}{ccccccc}
 A & \xrightarrow[\text{surj.}]{p} & A/R & \xrightarrow[\text{bij.}]{h} & \text{Im } f & \xrightarrow[\text{inj. (identity)}]{i} & B \\
 & & & & & & \uparrow \\
 & & & & & & f
 \end{array}$$