

$$\begin{array}{ccccc}
 A & \xrightarrow{g} & B & \xrightarrow{p} \twoheadrightarrow & \operatorname{cok}(g) \\
 \downarrow i & \nearrow s & \downarrow j & \nearrow t & \downarrow \\
 X & \xrightarrow{f} & Y & \xrightarrow{\pi} \twoheadrightarrow & Y/X
 \end{array}$$

A commutative diagram illustrating a relationship between two exact sequences. The top sequence is $A \xrightarrow{g} B \xrightarrow{p} \operatorname{cok}(g)$, and the bottom sequence is $X \xrightarrow{f} Y \xrightarrow{\pi} Y/X$. Vertical maps $i: A \rightarrow X$ and $j: B \rightarrow Y$ connect the objects. Dashed diagonal maps $s: X \rightarrow B$ and $t: Y \rightarrow \operatorname{cok}(g)$ complete the diagram. A small circle is placed near the map t .