

$$\begin{array}{ccc}
 X & \xrightarrow{f} & Y \\
 \alpha \downarrow & \circlearrowleft & \downarrow \beta \\
 A & \xrightarrow{g} & B
 \end{array}$$

A commutative diagram with four nodes:  $X$  (top-left),  $Y$  (top-right),  $A$  (bottom-left), and  $B$  (bottom-right). The horizontal arrows are  $f: X \rightarrow Y$  and  $g: A \rightarrow B$ . The vertical arrows are  $\alpha: X \rightarrow A$  and  $\beta: Y \rightarrow B$ . A dashed diagonal arrow  $s: X \rightarrow B$  points from  $X$  to  $B$ . A curved arrow  $\circlearrowleft$  is located in the center of the diagram, pointing from the top-left towards the bottom-right.

$(\in \mathbf{mod}_R)$