

$$\begin{array}{ccccc}
 X & \xrightarrow{a} & Y & \xrightarrow{b} & Z \\
 \parallel & & \downarrow \varphi & & \parallel \\
 X & \xrightarrow{a'} & Y' & \xrightarrow{b'} & Z
 \end{array}$$

The diagram illustrates a commutative square of maps between objects X , Y , Y' , and Z . The top row consists of maps $X \xrightarrow{a} Y \xrightarrow{b} Z$. The bottom row consists of maps $X \xrightarrow{a'} Y' \xrightarrow{b'} Z$. A vertical map $\varphi: Y \rightarrow Y'$ connects the two rows. The maps a and a' are related by the equation $a' = \varphi \circ a$, and the maps b and b' are related by the equation $b' = b \circ \varphi$. The vertical maps from X to X and from Z to Z are identity maps, indicated by the parallel symbol \parallel .