

$$\begin{array}{ccc}
 FX & \xrightarrow{Fb} & FY \\
 \uparrow c & \sqsubseteq & \uparrow d \\
 X & \xrightarrow{b} & Y \\
 \uparrow s & \sqsubseteq & \uparrow t \\
 & \mathbf{1} &
 \end{array}$$

A commutative diagram illustrating a relationship between objects X and Y and their images under a functor F . The diagram consists of the following elements:

- Top row: $FX \xrightarrow{Fb} FY$
- Middle row: $X \xrightarrow{b} Y$
- Left vertical arrow: $X \xrightarrow{c} FX$
- Right vertical arrow: $Y \xrightarrow{d} FY$
- Bottom-left curved arrow: $\mathbf{1} \xrightarrow{s} X$
- Bottom-right curved arrow: $\mathbf{1} \xrightarrow{t} Y$
- Central squares: Two squares, each containing the symbol \sqsubseteq , representing the naturality of the functor F . The top square is formed by c , Fb , b , and d . The bottom square is formed by s , t , b , and d .