

# 1 Functor Diagrams

Here is a complete functor diagram:

$$\begin{array}{ccc}
 \mathbf{C}^{\text{op}} & \xrightarrow{F} & \mathbf{D} \\
 X & \mapsto & F(X) \\
 f \downarrow & \mapsto & \uparrow Ff \\
 Y & \mapsto & F(Y)
 \end{array}$$

and here is a functor diagram without explicit mention of the functor and the categories:

$$\begin{array}{ccc}
 X & \mapsto & F(X) \\
 f \downarrow & \mapsto & \downarrow Ff \\
 Y & \mapsto & F(Y)
 \end{array}$$

Here are some tips:

- Use “leftarrow” to change the direction of the arrow.
- Use “swap” to change the position of the label.

# 2 Inline Diagrams

Here is an inline diagram  $0 \rightarrow K(x) \xrightleftharpoons[j_x]{i_x} K(X) \xrightarrow{\pi} \tilde{K}(X) \rightarrow 0$ . Note that one should always keep an eye on the line spacing.