

Quadratic function

Linear function

$$\begin{aligned} f: \mathbb{R} &\rightarrow \mathbb{R} \\ x &\rightarrow y = f(x) = a \cdot x + b \end{aligned} \quad (a, b \in \mathbb{R})$$

Quadratic function

$$\begin{aligned} f: \mathbb{R} &\rightarrow \mathbb{R} \\ x &\rightarrow y = f(x) = a \cdot x^2 + b \cdot x + c \end{aligned} \quad (a, b, c \in \mathbb{R}; a \neq 0)$$

general form

$$\begin{aligned} y = f(x) &= a \cdot (x - u)^2 + v \end{aligned} \quad (a, u, v \in \mathbb{R}; a \neq 0)$$

vertex form