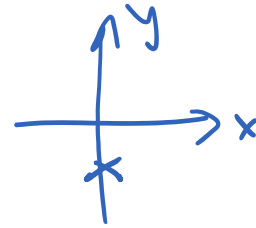


S. 75/2c) $f(x) = x^2 - 1,5$
 $S(0 | -1,5)$

$$x_1 = \sqrt{1,5}$$

$$x_2 = -\sqrt{1,5}$$



2f) $f(x) = (x - 0,2)^2 - \frac{3}{4}$

$$S(0,2 | -0,75) = \left(\frac{1}{5} \mid -\frac{3}{4}\right)$$

$$|x - 0,2| = \sqrt{0,75}$$

$$x - 0,2 = +\sqrt{0,75} \quad \text{oder} \quad x - 0,2 = -\sqrt{0,75}$$

$$x_1 = 0,2 + \frac{1}{2}\sqrt{3} \quad , \quad x_2 = 0,2 - \frac{1}{2}\sqrt{3}$$

S. 75/3 a, $S(-2 | 2)$

$$f(x) = (x - x_s)^2 + y_s$$

$$f(x) = (x + 2)^2 + 2$$

b, $S(11 | -8)$

$$f(x) = (x - 11)^2 - 8$$

c) $S(0 | 12)$

$$f(x) = (x - 0)^2 + 12$$

$$f(x) = x^2 + 12$$

d) $S(0,45 | 0)$

$$f(x) = (x - 0,45)^2 + 0$$

$$f(x) = (x - 0,45)^2$$

s. 75 (4) a) $S(-1|-2)$

$$x \mapsto (x+1)^2 - 2$$

Von der Scheitelform zur
allgemeinen Form

Scheitelform allgemeine Form

$$f(x) = a(x-d)^2 + e \xrightarrow{\substack{\text{Aus-} \\ \text{multi-} \\ \text{plizieren}}} f(x) = ax^2 + bx + c$$

$$\begin{aligned} f(x) &= (x-2)^2 + 3 \\ &= x^2 - 4x + 4 + 3 \\ &= x^2 - 4x + 7 \end{aligned}$$

$$\begin{aligned} f(x) &= 5(x+1)^2 - 3 \\ &= 5(x^2 + 2x + 1) - 3 \\ &= 5x^2 + 10x + 5 - 3 \\ &= 5x^2 + 10x + 2 \end{aligned}$$