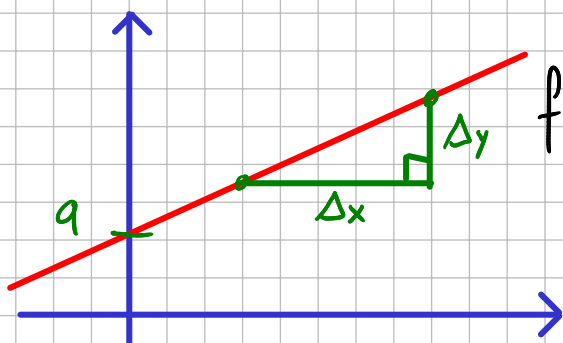


# Lineare Funktion



$$f(x) = m \cdot x + q$$

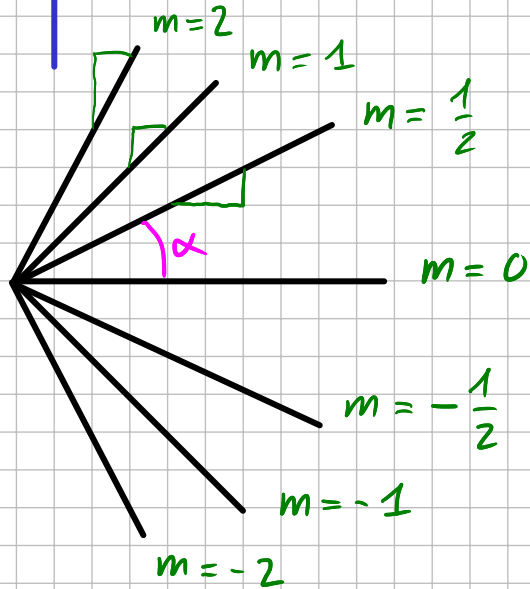
Steigung

$$f(0) = q$$

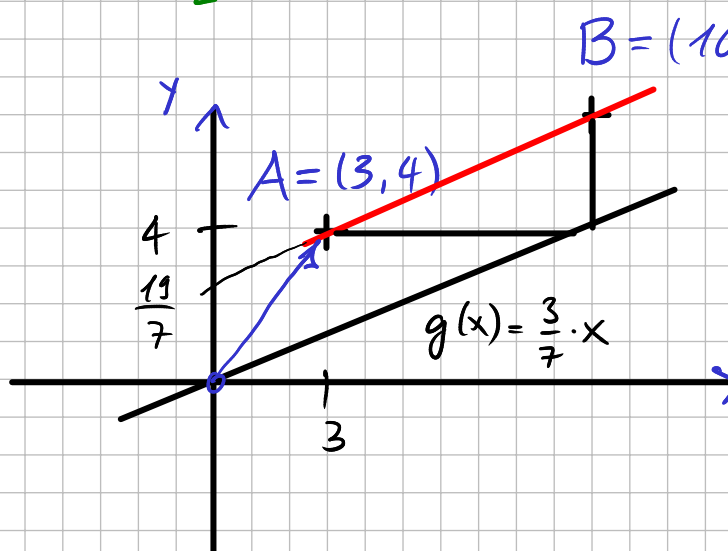
y-Achsenabschnitt

$$\frac{\Delta y}{\Delta x}$$

$$f'(x) = m$$



$$\tan(\alpha) = \text{Steigung}$$



$$B = (10, 7)$$

$$A = (3, 4)$$

$$f(x) = m \cdot x + q$$

$$m = \frac{\Delta y}{\Delta x} = \frac{3}{7}$$

$$f(3) = 4$$

$$3 \cdot \frac{3}{7} + q = 4$$

$$q = 4 - \frac{9}{7} = \frac{19}{7}$$

g verschieben durch  $A = (3, 4)$

$$f(x) = g(x-3) + 4 \leftarrow \text{in } y\text{-R. um } +4$$

↑  
Verschiebung in x-R um +3

$$f(x) = (x-3) \cdot \frac{3}{7} + 4 = x \cdot \frac{3}{7} + 4 - \frac{9}{7}$$