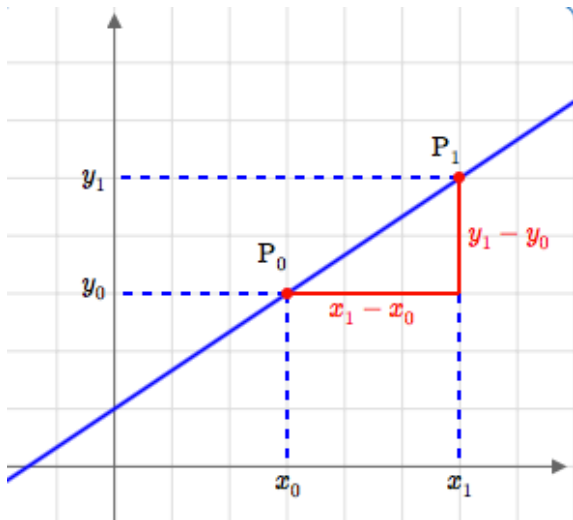


Steigung = Anstieg = Anstiegswinkel

lineare Funktion

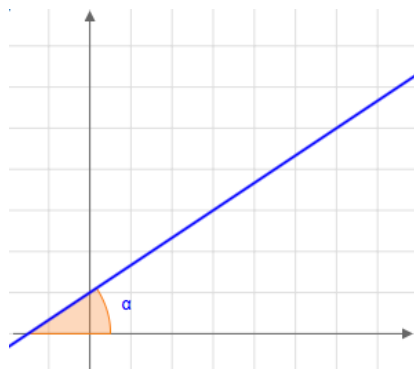
$$y = mx + n. \quad m \text{ für die Steigung}$$



$$m = \frac{\text{Höhenunterschied}}{\text{Längenunterschied}} = \frac{y_1 - y_0}{x_1 - x_0}$$

$$\tan \alpha = \frac{\text{Gegenkathete}}{\text{Ankathete}} = \frac{y_1 - y_0}{x_1 - x_0}$$

$$\Rightarrow \tan \alpha = m$$

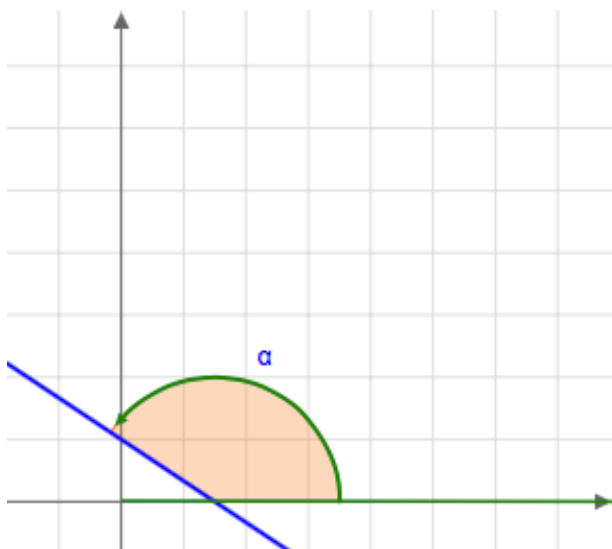


Steigungswinkel

Schnittpunkt der Geraden mit der x-Achse

Steigungswinkel ist immer positiv

Beachte



Anstiegswinkel:

positiver Winkelwert und Winkel zwischen Graphen und der x-Achse

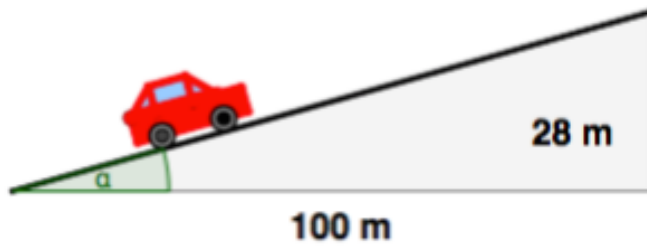
Es gilt also:

$$m = -\frac{2}{3} \rightarrow \tan \alpha = m = -\frac{2}{3}$$

$$\alpha = \arctan -\frac{2}{3} \approx -33,7^\circ$$



Steigungswinkel berechnen : $180^\circ - 33,7^\circ = 146,3^\circ$



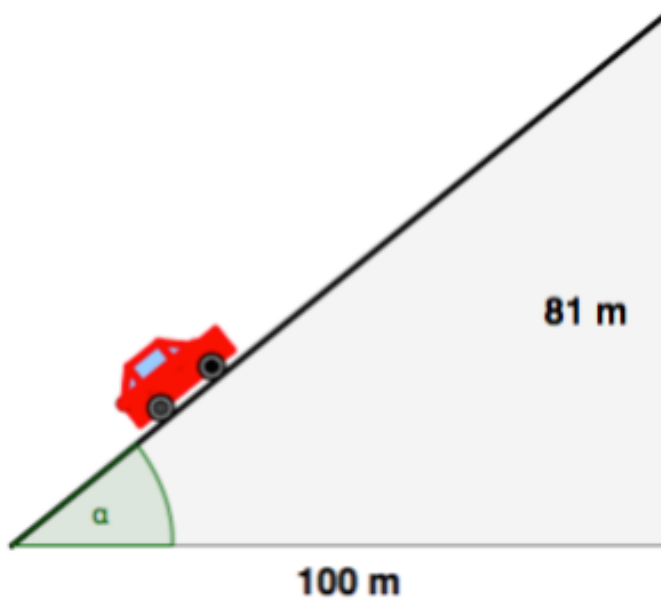
$$m = \frac{28}{100} = 28 \%$$

$$\alpha = 15.64^\circ = 0.27 \text{ [rad]}$$



$$\frac{\alpha}{m} = \frac{0.27}{0.28} = 0.98$$

$$m = \frac{28}{100} = 28 \%$$



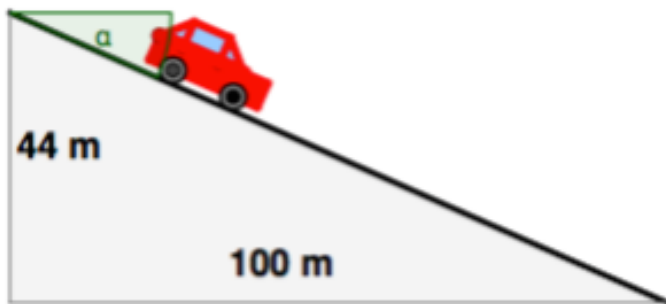
$$m = \frac{81}{100} = 81 \%$$

$$\alpha = 39.01^\circ = 0.68 \text{ [rad]}$$



$$\frac{\alpha}{m} = \frac{0.68}{0.81} = 0.84$$

$$m = \frac{81}{100} = 81 \%$$



$$m = \frac{44}{100} = 44 \%$$

$$\alpha = 23.75^\circ$$
$$= 0.41 \text{ [rad]}$$



$$\frac{\alpha}{m} = \frac{0.41}{0.44} = 0.94$$

$$m = \frac{44}{100} = 44 \%$$