

# Slope

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ES: How do we find the slope of a line?

Slope Formula

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

example

How do we use it?

(1, 2)

$x_1$   $y_1$

(6, 5)

$x_2$   $y_2$

$$m = \frac{5 - 2}{6 - 1} = \frac{3}{5} \quad \begin{array}{l} \text{rise} \\ \text{run} \end{array}$$

Parallel lines

(//)

Lines are // when the slopes are the same.

$$m = \frac{3}{5}$$



$$m = \frac{3}{5}$$



Perpendicular lines

(⊥)

Lines are ⊥ when the slopes are opposite reciprocals.

$$m = \frac{3}{5}$$



$$m = -\frac{5}{3}$$



Summary