... tanθ = opp

LT6.6b | How do I use parallel and perpendicular lines to identify shapes or the coordinate plane? 2/14

$m = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$ $(x_1, y_1)(x_2, y_2)$

$(-9, 18)$ $(6, -20)$

$x_1\ y_1$ $x_2\ y_2$

$m = \frac{-20 - 18}{6 - -9} = \frac{-38}{15}$

Parallel Lines have **equal** slopes

Perpendicular Lines have negative opposite for slopes $(\frac{3}{1}, \frac{1}{-3})$ or the product of the slopes equals (-1) $\frac{3}{1} \cdot \frac{1}{-3} = \frac{3}{-3} = -1$

Vertical Lines have an undefined slope $\frac{1}{0}$

Horizontal Lines have zero slope $\frac{0}{1}$

↔ and ↕ always ⊥

right angles