Point-Point Form of a Line

Preliminaries
- The Slope of a Line
- Point-Slope Form of a Line

Objectives
- Find the equation of a line, given two points on the line

Intercept-Intercept Form

\[ m = \frac{0 - b}{a - 0} = \frac{b}{a} \]
\[ y - b = \frac{b}{a}(x - 0) \]

Example 1

\[ m = \frac{0 - b}{a - 0} = \frac{-b}{a} \]
\[ y - b = \frac{-b}{a}(x - 0) \]
\[ y = \frac{-b}{a}x + b \]
\[ y - 0 = \frac{-b}{a}(x - a) \]

\[ y - 4 = \frac{3}{5}(x + 2) \]
\[ y - 1 = \frac{3}{5}(x - 3) \]

Recap

To find the equation of a line, given two points,
- Find the slope using the slope formula
- Find the equation using the point-slope equation of a line