8.4 Slope of a line

- **Slope Intercept Form of a Line**
  \[ y = mx + b \]

- **Slope**
  \[ m = \frac{\text{change in } y}{\text{change in } x} \]

(3,5) and (-1,1) \hspace{2cm} (-4,-2) and (4,2)

horizontal lines

vertical lines

**Average rate of change**

\[ 3x - 4y = -8 \]
Point-slope form of a line

Given a point and a slope graph the line and come up with the equation of the line

\((-1, 6) \ m = \frac{5}{2}\)

\((-2, -5) \ m = -3\)

REMEMBER!!!

*** 1x = x *** slope is 1!

*** \(-\frac{a}{b} = -\frac{a}{b} = \frac{a}{-b} ***