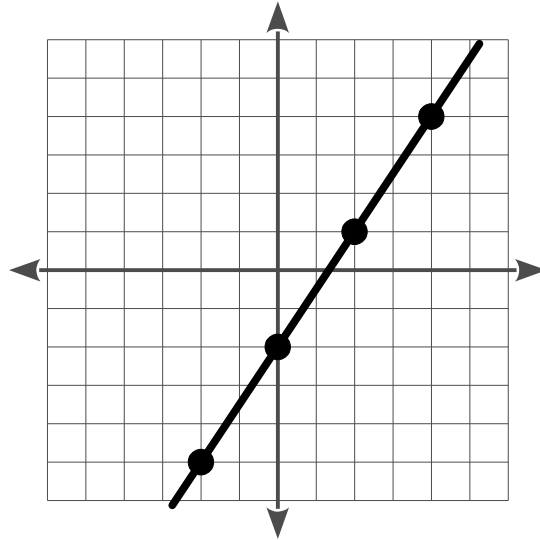


Reference: Lines

Given any two points, (x_1, y_1) and (x_2, y_2) ... the slope between them is $m = \frac{y_1 - y_2}{x_1 - x_2} = \frac{\text{rise}}{\text{run}}$.

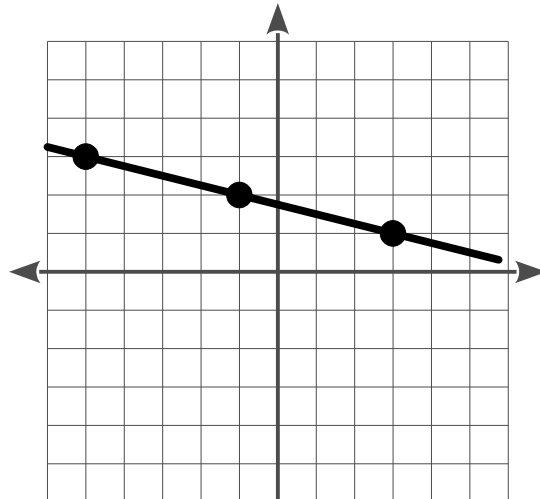
Slope-intercept form

- $y = mx + b$
- $m = \text{slope}, b = \text{y-intercept}$
- Example: $y = \frac{3}{2}x - 2$
- Graphing steps:
 1. place dot at y -intercept
 2. use slope to place more dots
 3. connect



Point-slope form

- $y - y_1 = m(x - x_1)$
- $(x_1, y_1) = \text{a point on the line}, m = \text{slope}$
- Example: $y - 2 = -\frac{1}{4}(x + 1)$
- Graphing steps:
 1. place dot at (x_1, y_1)
 2. use slope to place more dots
 3. connect



Standard form

- $Ax + By = C$
- A, B, C are integers
- Example: $-4x + 3y = 12$
- Graphing steps:
 1. y -intercept: if $x = 0, y = C/B$
 2. x -intercept: if $y = 0, x = C/A$
 3. place dots at both intercepts
 4. connect

