

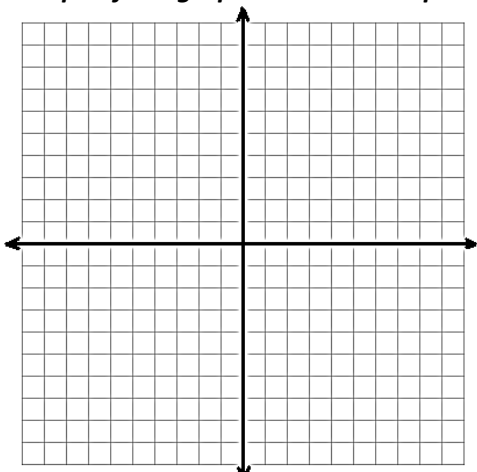
Name: _____

Date: _____

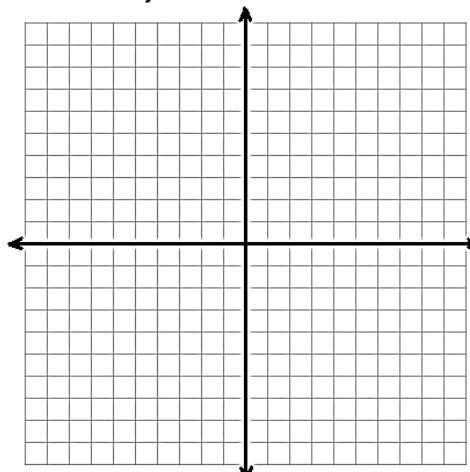
Slope-Intercept Form Algebra (Grade 8)

Exercise #1: Graph each of the following equations on the graphs provided. When you are completed **state the slope of the graph** as well as **the point where the graph crosses the y-axis**.

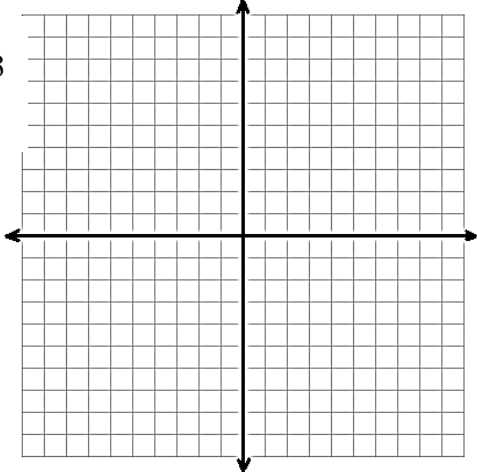
$$y = \frac{1}{2}x + 4$$



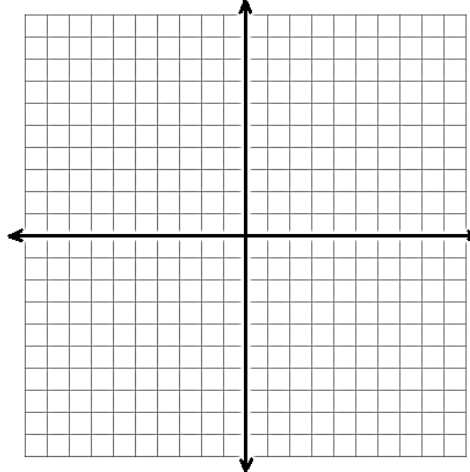
$$y = -4x + 1$$



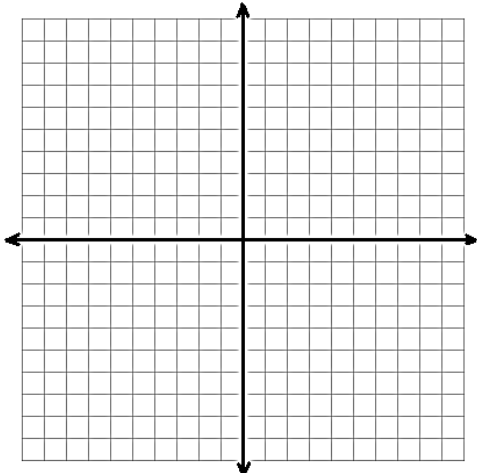
$$y = -\frac{1}{2}x + 3$$



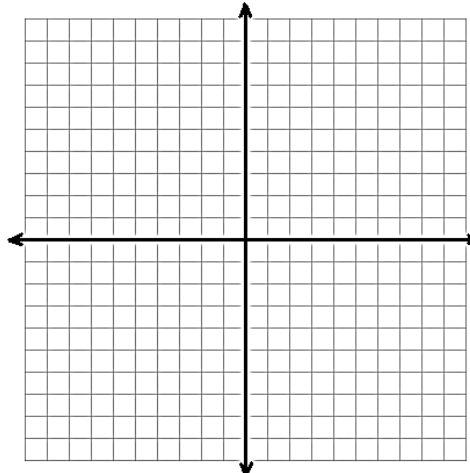
$$y = x - 2$$



$$y = 3x + 2$$



$$y = -2x - 3$$

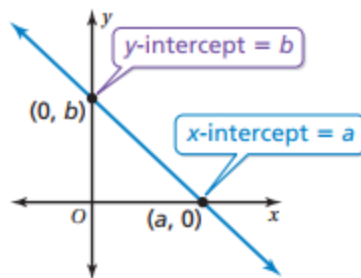


Key Ideas

Intercepts

The **x-intercept** of a line is the x-coordinate of the point where the line crosses the x-axis. It occurs when $y = 0$.

The **y-intercept** of a line is the y-coordinate of the point where the line crosses the y-axis. It occurs when $x = 0$.



Slope-Intercept Form

Words A linear equation written in the form $y = mx + b$ is in **slope-intercept form**. The slope of the line is m , and the y-intercept of the line is b .

Algebra

$$y = mx + b$$

slope y-intercept

Exercise #2:

Find the slope and the y-intercept of the graph of each linear equation.

a. $y = -4x - 2$

b. $y - 5 = \frac{3}{2}x$

Exercise #3:

Find the slope and the y-intercept of the graph of the linear equation.

1. $y = 3x - 7$

2. $y - 1 = -\frac{2}{3}x$