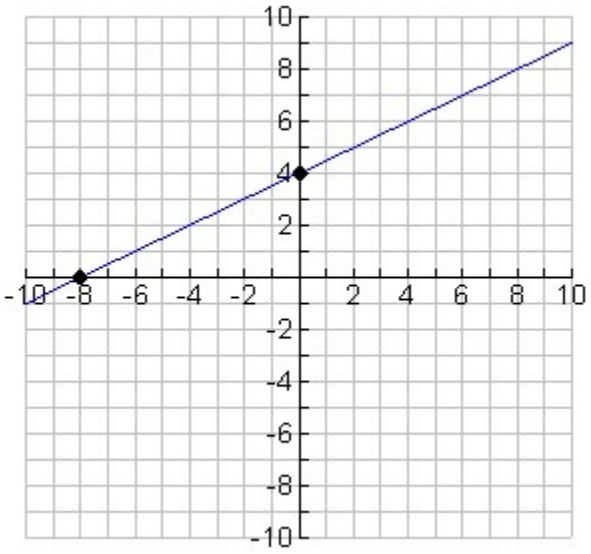
3.4.1 Graphs, Slopes, Intercepts, Equations and Check

One partner will find the y-intercept of each graph and the other partner will find the slope of each graph. You will both then create an equation that represents the graph. Finally, you will check your equation using the Desmos.

GRAPH A



Partner A

Slope = _____

Partner B

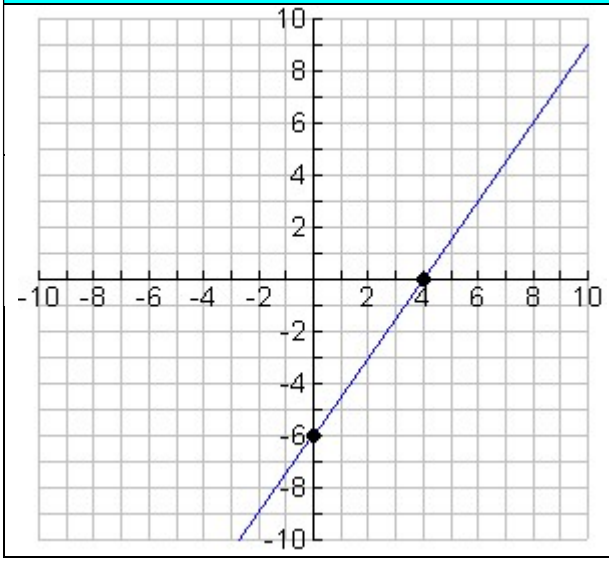
y-intercept = _____

Join both A and B to create an equation

Equation = _____

Check you answer using the Desmos.

GRAPH B



Partner B

Slope = _____

Partner A

y-intercept = _____

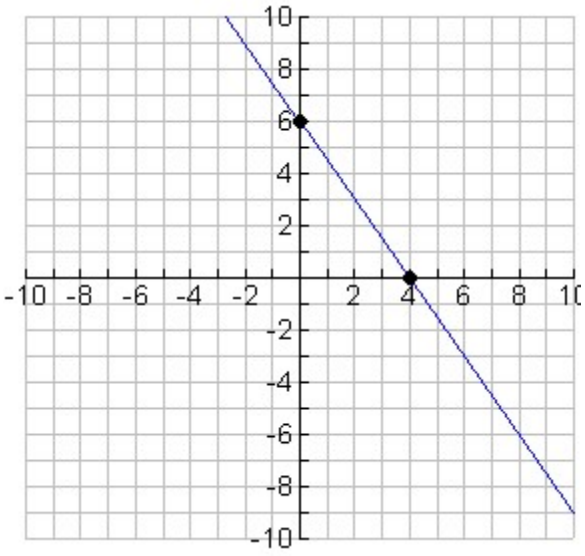
Join both A and B to create an equation

Equation = _____

Check you answer using Desmos.

3.4.1 Graphs, Slopes, Intercepts, Equations and Check
(Continued)

GRAPH C



Partner A

Slope = _____

Partner B

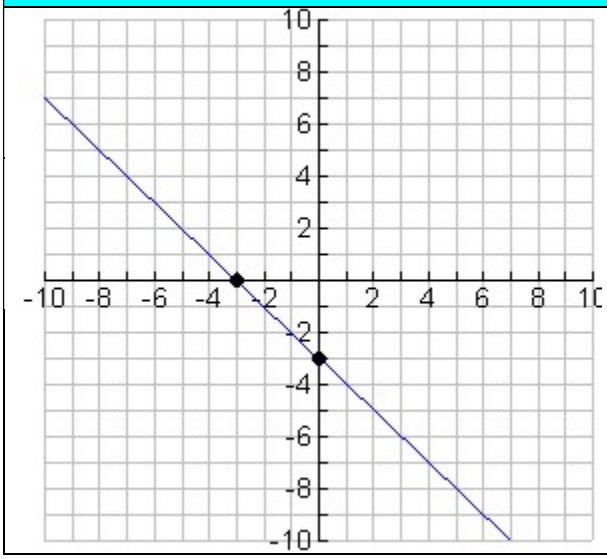
y-intercept = _____

Join both A and B to create an equation

Equation = _____

Check you answer using the Desmos.

GRAPH D



Partner B

Slope = _____

Partner A

y-intercept = _____

Join both A and B to create an equation

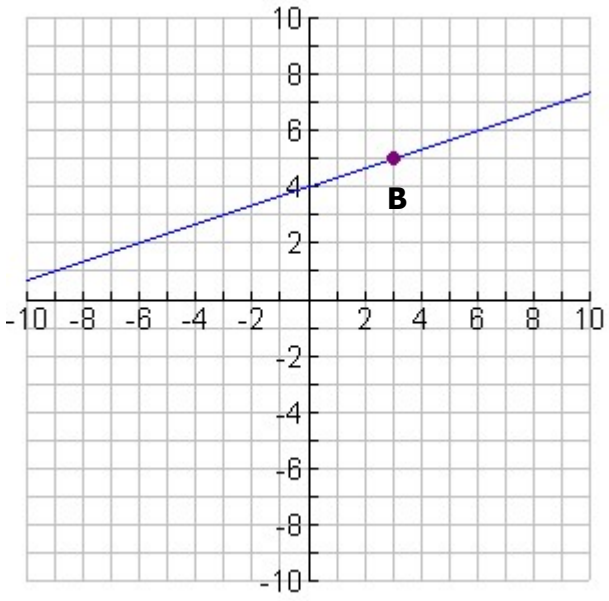
Equation = _____

Check you answer using the Desmos.

3.4.3 Can Graphing Get Any Easier?

Investigation 1

$$y = \frac{1}{3}x + 4$$



1. Start at the y-intercept.

2. Only moving up (+) or down (-), how many units do you need to reach the same level as point B? _____

3. Only moving right (+), how many units do you have to move your pencil to connect to point B? _____

4. Given the equation for the graph state the slope and the y-intercept

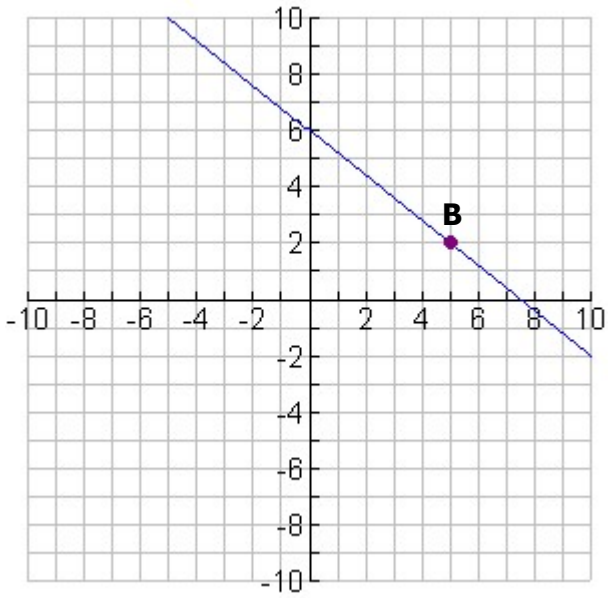
   Slope = _____

   y-intercept = _____

3.4.3 Can Graphing Get Any Easier? (Continued)

Investigation 2

$$y = -\frac{4}{5}x + 6$$



1. Start at the y-intercept.

2. Only moving up (+) or down (-), how many units do you need to reach the same level as point B? _____

3. Only moving right (+), how many units do you have to move your pencil to connect to point B? _____

4. Given the equation for the graph state the slope and the y-intercept

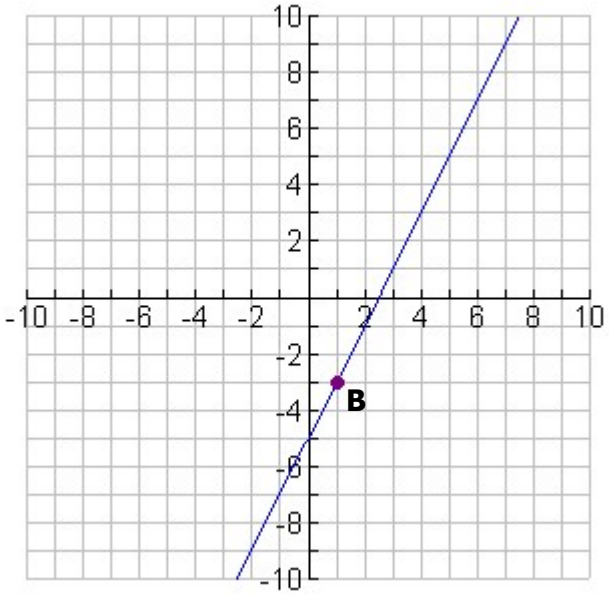
   Slope = _____

   y-intercept = _____

3.4.3 Can Graphing Get Any Easier? (Continued)

Investigation 3

$$y = 2x - 5$$



1. Start at the y-intercept.

2. Only moving up (+) or down (-), how many units do you need to reach the same level as point B? _____

3. Only moving right (+), how many units do you have to move your pencil to connect to point B? _____

4. Given the equation for the graph state the slope and the y-intercept

   Slope = _____

   y-intercept = _____

3.4.3 Can Graphing Get Any Easier? (Continued)

Summary

Discuss each question with your partner and both partners write answers.

1. Looking at all three investigations, can you relate the values from steps 2 and 3 with the slope or the y-intercept? Explain the relationship.

2. Given the following equation:

$$y = \frac{2}{3}x - 4$$

Slope: _____

y-intercept: _____

Describe a method to graph this equation by hand using the slope and the y-intercept.

3. Using the grid provided below graph the equation $y = \frac{2}{3}x - 4$. Write the steps you followed to the right of your graph.