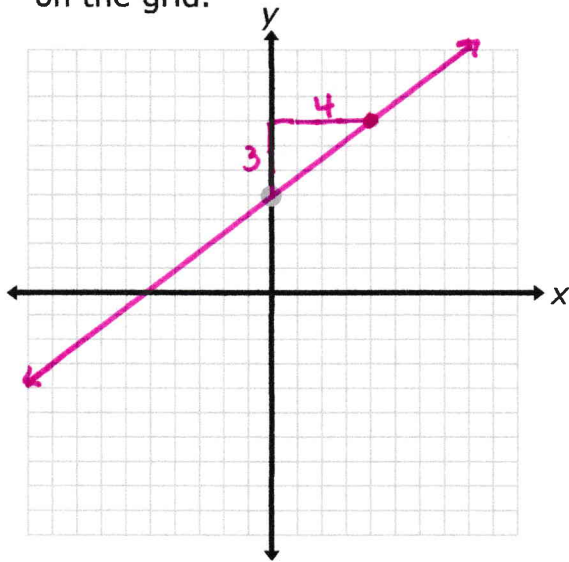


Graphing Slope

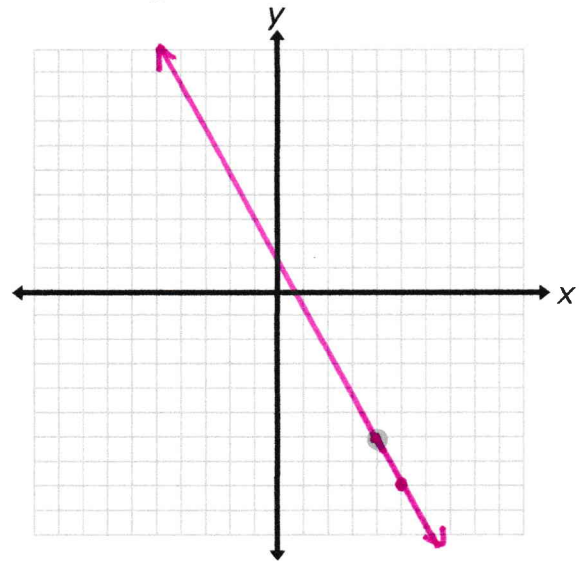
Example 1

Graph a line with a slope of $\frac{3}{4}$ that passes through the point on the grid.



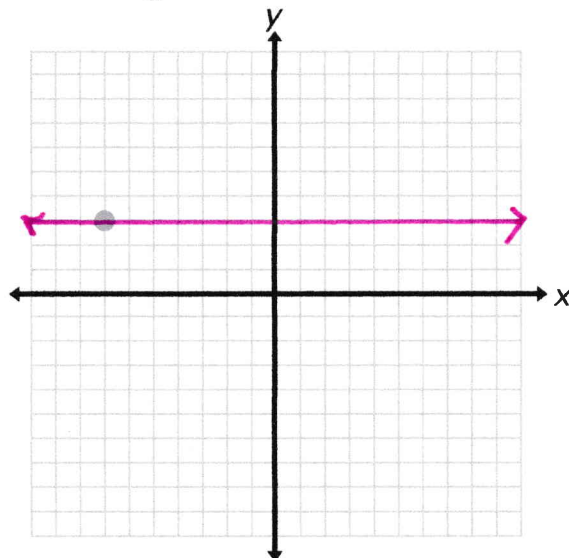
Example 2

Graph a line with a slope of -2 that passes through the point on the grid.



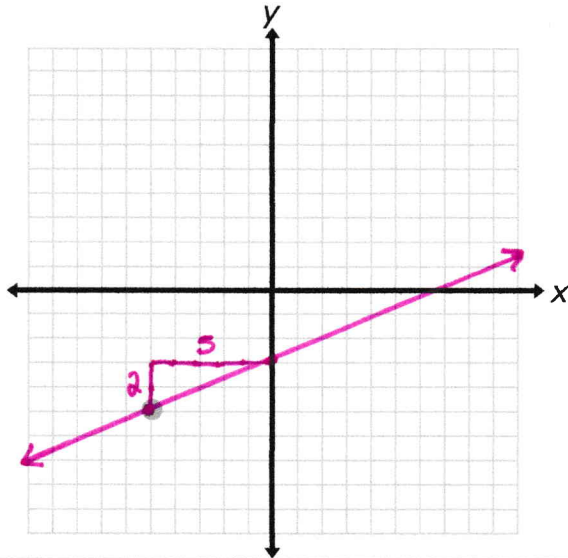
Example 3

Graph a line with a slope of 0 that passes through the point on the grid.



Graphing Slope

1. Graph a line with a slope of $\frac{2}{5}$ that passes through the point on the grid.

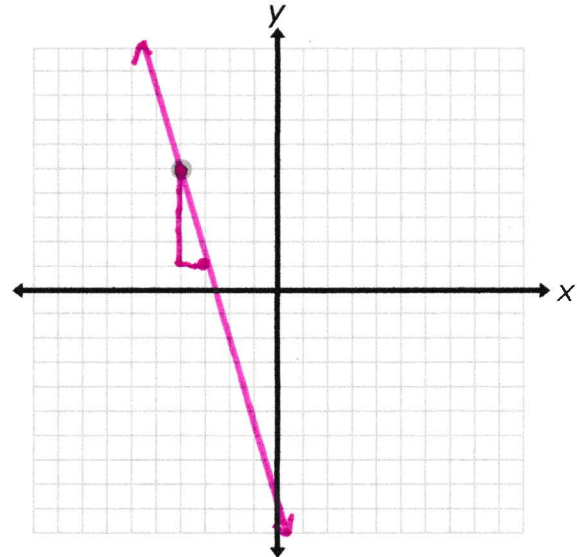


Hints:

1. Starting at the point given, count up 2 units.
2. Then, count 5 units to the right.
3. Plot the point and draw a line through the two points.

Note: You can also count 2 units down and 5 units to the left.

2. Graph a line with a slope of -4 that passes through the point on the grid.

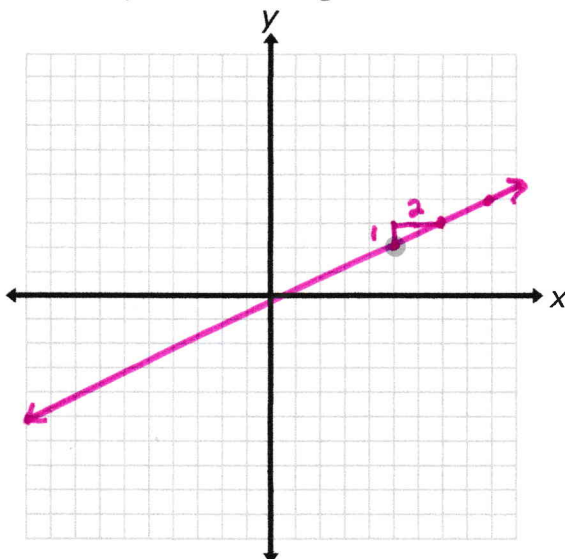


Hints:

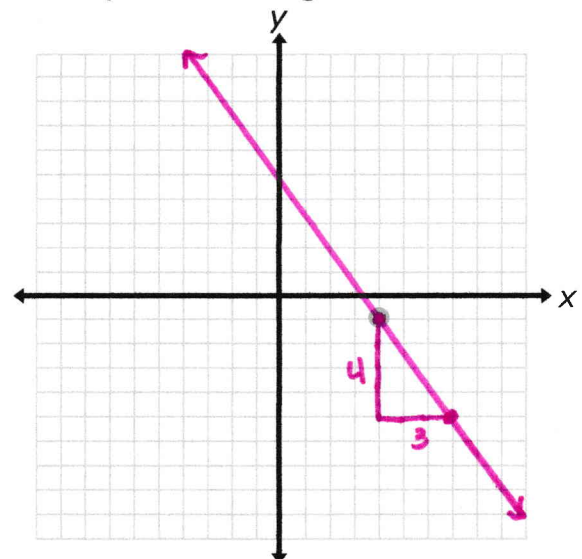
1. Starting at the point given, count down 4 units.
2. Then, count 1 unit to the right.
3. Plot the point and draw a line through the two points.

Note: You can also count 4 units up and 1 unit to the left.

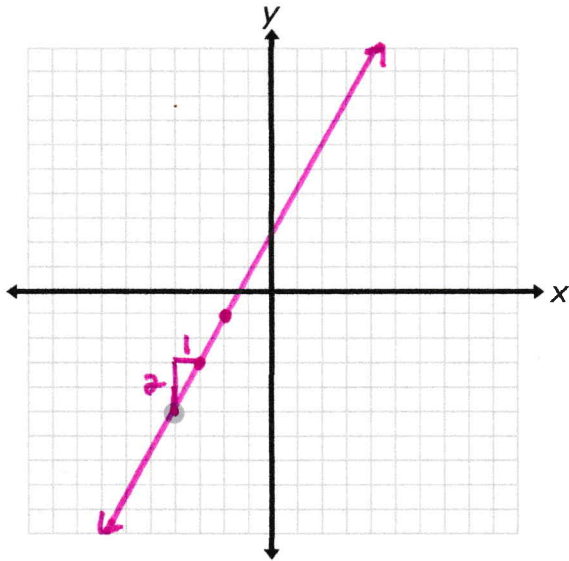
2. 1. Graph a line with a slope of $\frac{1}{2}$ that passes through the point on the grid.



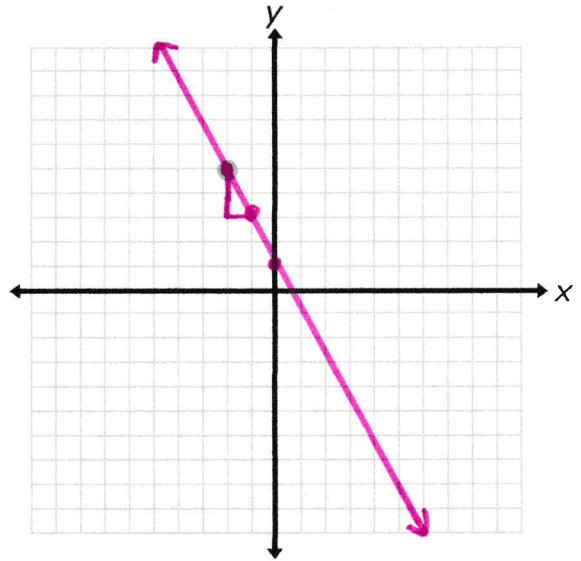
2. 2. Graph a line with a slope of $-\frac{4}{3}$ that passes through the point on the grid.



3. Graph a line with a slope of 2 that passes through the point on the grid.



4. Graph a line with a slope of -2 that passes through the point on the grid.



3

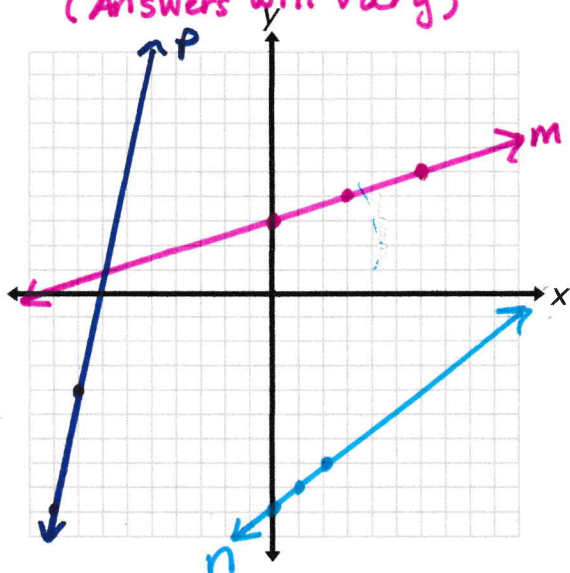
1. On the following grid, graph and label 3 lines with the following slopes. (Use any starting point)

Line m : slope of $\frac{1}{3}$

Line n : slope of 1

Line p : slope of 5

(Answers will vary)



a. Compare the lines that you graphed and their slope. What can you conclude about the steepness of the line based on the slope of the line?

The larger the number,
the steeper the slope.

b. Look back at other lines that you graphed in this lesson. What can you conclude about the direction of the line based on whether the slope is positive or negative?

A positive slope means
the line will rise.

A negative slope means
the line will fall.

2. Jason is an architect who is designing the streets for a new neighborhood. He is designing an intersection where two streets meet at the same point.

Jason gives the following directions to create the intersection on the grid.

- Draw a line with a slope of 2 through the point (5,2). (Label this Mulberry Ave.)
- Draw a line with a slope of $\frac{4}{2}$ through the point (5,2).



Part A: Is Jason able to create an intersection with these two directions? Explain your reasoning.

No, these two lines represent the same line. They lie on top of each other because they have the same slope and pass through the same point. A slope of 2 is equal to a slope of $\frac{4}{2}$ because $\frac{4}{2} = 2$.

Part B: Use the following directions to complete the street design.

- Draw a line with a slope of $-\frac{1}{2}$ that passes through the point (5,2). Label this street Strawberry Lane.
- Draw a line with a slope of -4 that passes through the point (3,10). Label this street Cranberry Court.
- Draw a line with a slope of $-\frac{3}{6}$ that passes through the point (8,5). Label this street Dingleberry Drive.
- Which two streets are parallel? Why do you think they are parallel?

Strawberry Lane and Dingleberry Drive are parallel. They are parallel because they have the same slope. $-\frac{3}{6} = -\frac{1}{2}$