

Lesson 1: 6.1 Graph from slope intercept form

The **slope of a line (m)** is the ratio of the:

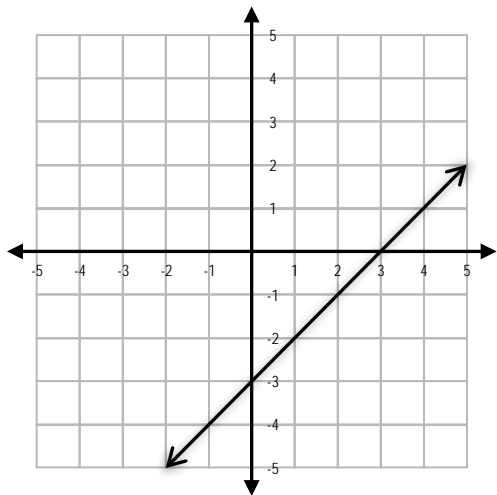
change in y to the **change in x** .

The **y -intercept (b)** is the **point** at which the line passes through the **y -axis**.

$$y = mx + b$$

\swarrow y -intercept \searrow
 \nearrow slope

1.

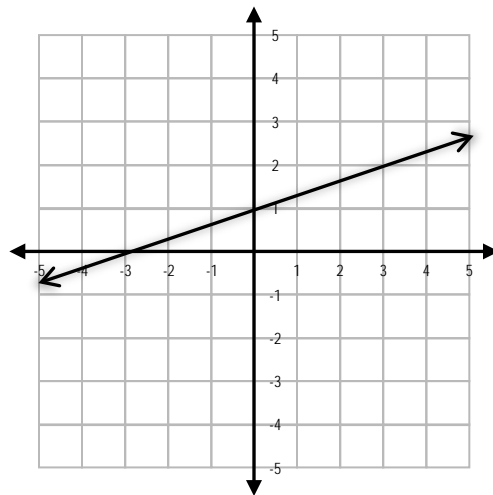


Slope: _____

 y -intercept: _____

Equation: _____

2.

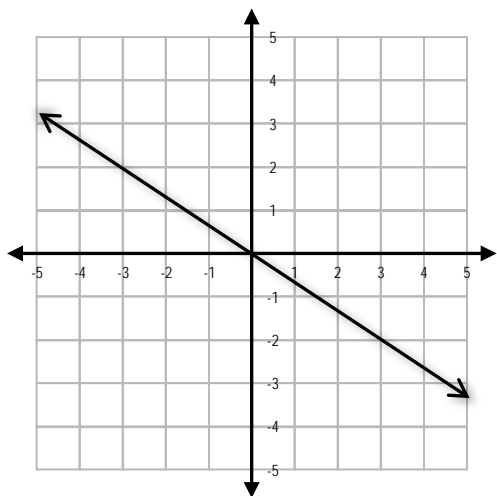


Slope: _____

 y -intercept: _____

Equation: _____

3.

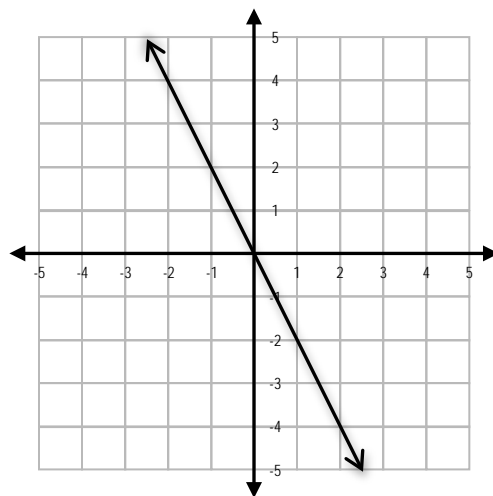


Slope: _____

 y -intercept: _____

Equation: _____

4.



Slope: _____

 y -intercept: _____

Equation: _____

The **slope of a line** (m) is the ratio of the **change in y** to the **change in x** .

The **y -intercept** (b) is the **point** at which the line passes through the **y -axis**.

$$y = mx + b$$

5. Write the equation of a line with a slope of -2 and y -intercept of (0, 5).

6. Write the equation of a line with a slope of 4 and y -intercept of (0, -3).

7. Write the equation of the line represented by the table below.

x	y
2	1
0	4
-2	7

8. Write the equation of the line represented by the table below.

x	y
4	-2
0	-3
-4	-4

9. Write the equation of the line passing through (-2, -1) and (2, 5).

10. Write the equation of the line passing through (6, 2) and (-3, -4).

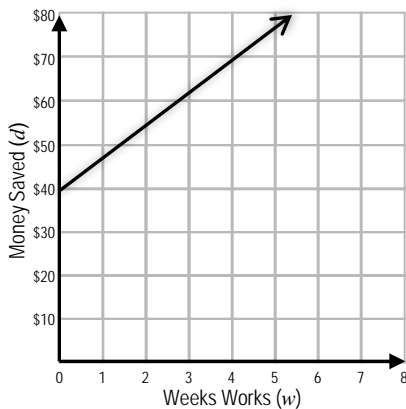
Solving Math Problems

- 1 Determine what the question is asking.
- 2 Determine the math concept required.
- 3 Determine relevant information.
- 4 Solve the problem, then interpret the answer.
- 5 Check the reasonableness of your answer.

$$y = mx + b$$

y-intercept ↗
slope ↖

11. Henrietta is saving money while working a summer job. At the beginning of summer, she has \$40 in her bank account. She saves \$30 more every 4 weeks. Write an equation to show the relationship between money saved (d) and weeks (w) worked.

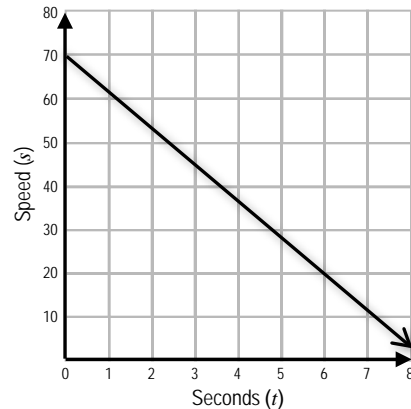


Slope: _____

y-intercept: _____

Equation: _____

12. Wayne is driving and notices traffic ahead is coming to a stop. He is going 70 miles per hour and slows 50 miles per hour every 6 seconds. Write an equation to show the relationship between his speed (s) to the number of seconds (t) that pass.



Slope: _____

y-intercept: _____

Equation: _____

CFU

- 1 How did I/you determine what the question is asking?
- 2 How did I/you determine the math concept required?
- 3 How did I/you determine the relevant information?
- 4 How did I/you solve and interpret the problem?
- 5 How did I/you check the reasonableness of the answer?

The **slope of a line (m)** is the ratio of the **change in y** to the **change in x** .

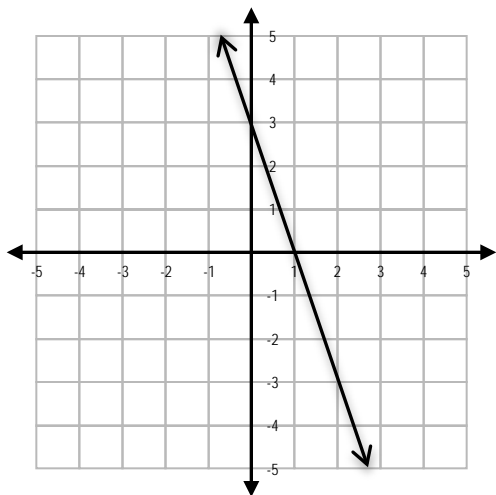
The **y -intercept (b)** is the **point** at which the line passes through the **y -axis**.

$y = mx + b$

↑ y -intercept

↑ slope

1.

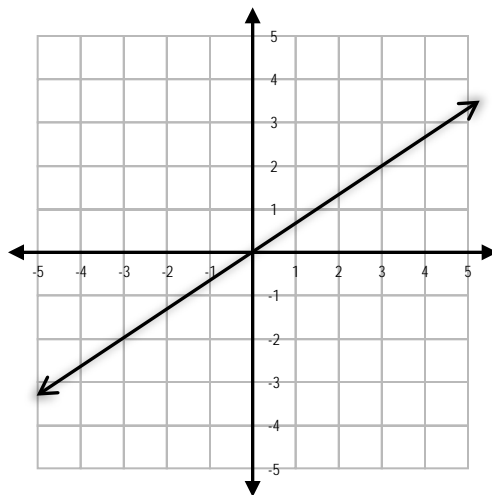


Slope: _____

y -intercept: _____

Equation: _____

2.



Slope: _____

y -intercept: _____

Equation: _____

3. Write the equation of a line with a slope of 5 and y -intercept of $(0, -7)$.

4. Write the equation of the line represented by the table below.

x	y
1	-4
0	-2
-1	0

5. Write the equation of the line passing through $(3, 0)$ and $(-2, 5)$.

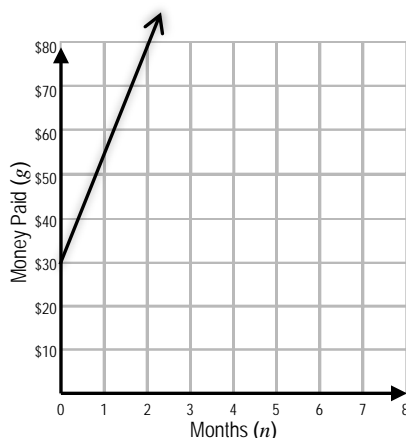
Solving Math Problems

- 1 Determine what the question is asking.
- 2 Determine the math concept required.
- 3 Determine relevant information.
- 4 Solve the problem, then interpret the answer.
- 5 Check the reasonableness of your answer.

$$y = mx + b$$

y-intercept → b
slope → m

6. Carlos is joining a new gym. The gym charges a \$30 activation fee and a monthly rate of \$25. Write an equation for determining the amount of money Carlos will pay the gym (g) for any number of months (n).



Slope: _____

y-intercept: _____

Equation: _____