

Starting With Equations: Classwork

1. Equations to Graphs

a. Graph each equation.

A. $y = 2x + 3$

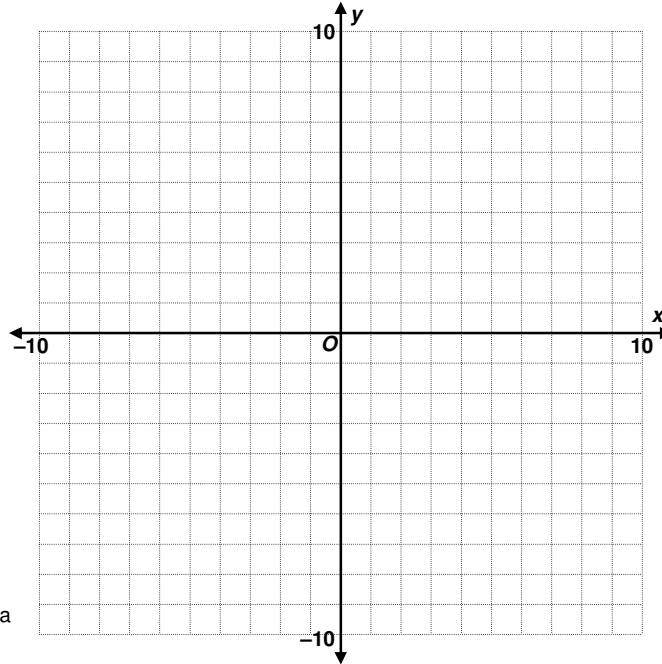
B. $y = \frac{1}{4}x - 7$

C. $y = 6$

D. $y = 1 - \frac{3}{5}x$

E. $x = -8$

F. $y = x - 5$



b. Time to generalize.

Explain the steps to making a graph to match an equation.

2. Equations to Tables

a. Complete the table to match each equation.

$$y = 5x + 7$$

x	y
0	
1	
2	
3	

$$y = 20 - 4x$$

x	y
0	
1	
2	
3	

$$y = \frac{1}{3}x + 5$$

x	y
0	
1	
2	
3	

b. Now complete these tables for the same equations. Show your work!

$$y = 5x + 7$$

x	y
10	
8	
-10	
-20	

$$y = 20 - 4x$$

x	y
10	
5	
-2	
-100	

$$y = \frac{1}{3}x + 5$$

x	y
30	
6	
-9	
-24	

c. Time to generalize. Explain the steps to making a table to match an equation.

3. Equations to Story Problems

- a. Write a story problem to match the equation: $y = 11 - 3x$
State what each variable represents.

- b. Write a story problem to match the equation: $y = \frac{3}{4}x + 20$
State what each variable represents.

- c. Write a story problem to match the equation: $y = 15$
State what each variable represents.

- d. **Time to generalize.** Explain how to write a story problem to match an equation.

4. Compare and Contrast

- a. Explain how making a story, a table, and a graph from an equation are similar.

- b. Explain how making a story, a table, and a graph from an equation are different.

Starting With Equations: Homework

Answer the following on your POD paper.

5. Callie has 50 cookies. She is going to take 3 of them to school everyday to eat with her lunch.
 - a. Write an equation for the number of cookies she has left c after any number of days d .
 - b. Which variable is the dependent variable?
 - c. Which variable is the independent variable?
 - d. What does the slope represent in the context of the story?
 - e. What does the y -intercept represent in the context of the story?
 - f. How many cookies will she have left after 6 days?
Use your equation to show how you know. Show your work.
 - g. In how many days will she only have 8 cookies left?
Use your equation to show how you know. Show your work.

6. Gordon is buying books online. Each book costs \$7.25, and there is a \$4 shipping fee on the order.
 - a. Write an equation for the total cost c for any number of books b .
 - b. Which variable is the dependent variable?
 - c. Which variable is the independent variable?
 - d. What does the slope represent in the context of the story?
 - e. What does the y -intercept represent in the context of the story?
 - f. How much will it cost to order 8 books?
Use your equation to show how you know. Show your work.
 - g. In how many books did he purchase if the total cost was \$120?
Use your equation to show how you know. Show your work.