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Basic Function Tables - Independent Practice Worksheet

Complete the function table for each equation.

1. $y = x - 7$

x	y
2	
5	
-1	
7	
3	

2. $y = x - 3$

x	y
8	
2	
-2	
9	
1	

3. $y = x - 4$

x	y
3	
6	
-7	
4	
2	

4. $y = 7x - 3$

x	y
6	
5	
-9	
1	
2	

5. $y = 4x - 2$

x	y
9	
2	
-6	
3	
4	

6. $y = 8x - 5$

x	y
3	
5	
-2	
1	
4	

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7. $y = -3x$

x	y
-3	
2	
8	
-1	
4	

8. $y = -2x$

x	y
-9	
5	
2	
-5	
-3	

9. $y = -9x$

x	y
-1	
2	
3	
-4	
8	

10. $y = -6x$

x	y
-5	
4	
3	
-1	
2	

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Functions as Inputs and Outputs - Independent Practice Worksheet

Complete all the problems. You will need scrap paper and graph paper.

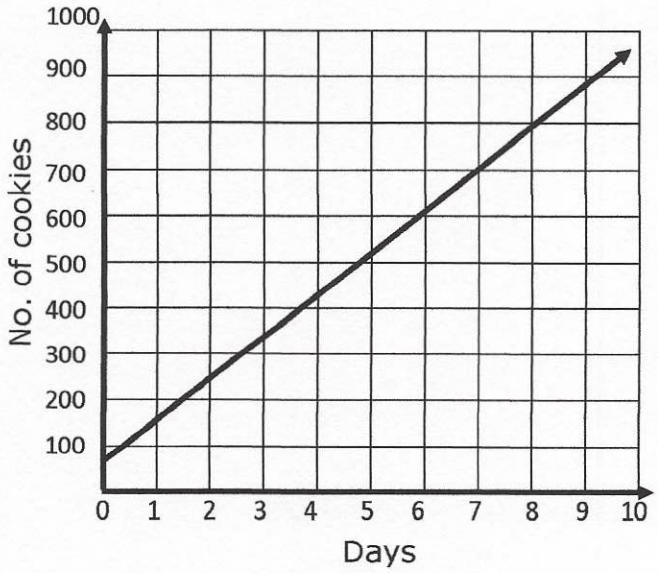
1. Graph this function:

x	0	1	2
y	0	-2	-4

2. Complete the table.

f(x) = 2x+5	x	-2	-1	1	2
	f(x)				

3. This graph shows how many cookies Julia makes over 9 days.



How many cookies will Julia make in 7 days?

Name _____ Date _____

4. Graph this function:

x	0	-2	-4
y	0	1	2

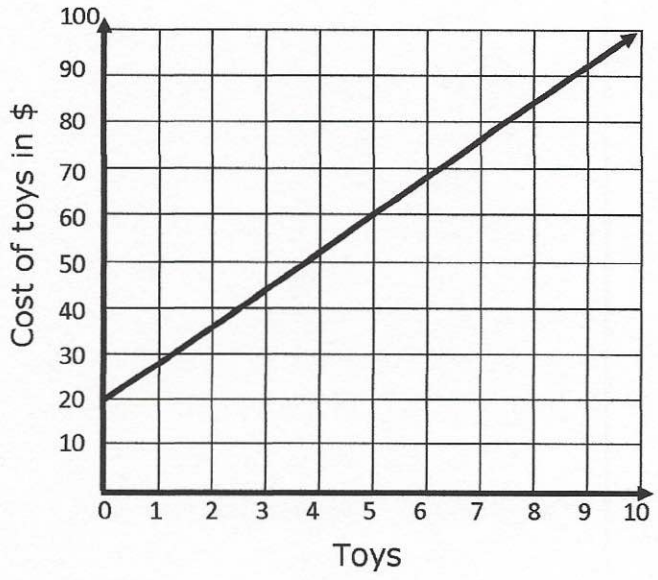
5. Complete the table.

$f(x) = x+3$	x	-3	-1	1	3
	$f(x)$				

6. Graph this function:

x	0	-1	-2
y	0	4	8

7. This graph shows how much money Jack spent on toys.



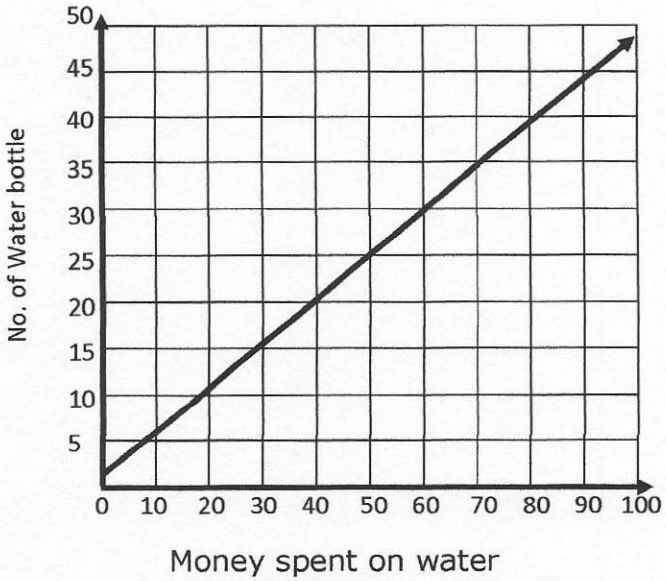
If Jack purchases 5 toys, how much money will he spend?

Name _____ Date _____

8. Complete the table.

$f(x) = x - 2$	x	-6	-1	1	6
	$f(x)$				

9. This graph shows how much money Aylin spent on water bottles.



If she buys 25 water bottles, how much money will she spend?

10. Complete the table.

f(x) = 6x	x	-7	-1	1	7
	$f(x)$				

Name _____ Date _____

Analyzing Functional Relationships by Graphing - Independent Practice

Complete all the problems.

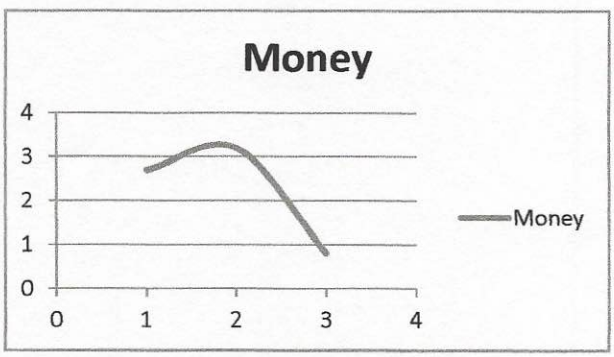
1. Michael is going to the playground. First, he walks to church. He stays there for few minutes. Then he hires a taxi to drive him to the playground. The taxi stops at a coffee shop and then the playground. Draw the graph representing Michael's trip to the playground.

2. Describe the graph of the function. Is this linear or non-linear?

x	1	2	3	4	5
y	5	10	15	20	25

3. Describe the graph of the function between y = 2 and y = 4.

4. Describe the graph of the function. Is this relationship non-linear?



5. Isabella is a plumber. She walks to the market. She buys some tools and stays there a few minutes. Then she hires a taxi to go to Sarah's house. After Sarah's she takes the taxi to Olivia's house. Draw the graph representing Isabella's trip to Olivia's house.

6. Describe the graph of the function. Is this linear or non-linear?

x	1	2	3	4	5
y	4	10	8	9	7

Name _____ Date _____

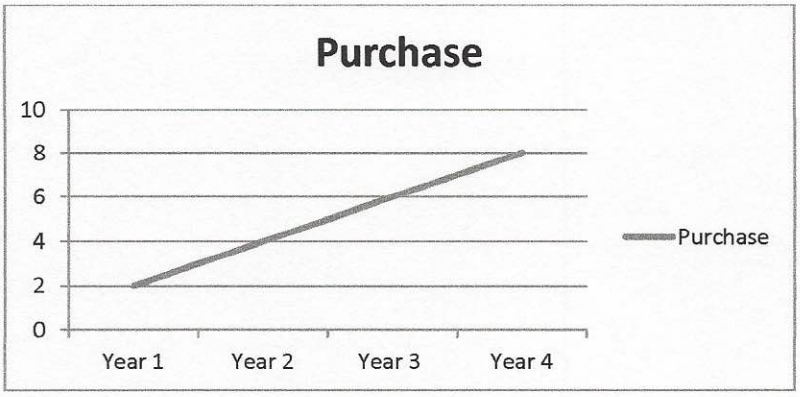
7. Describe the graph of the function between x = 3 and x = 4.

8. Describe the graph of the function between x = -4 and x = -2.

9. Describe the graph of the function. Is this linear or non-linear.

x	1	2	3	4	5
y	20	16	12	8	4

10. Describe the graph of the function. Is this relationship linear?



+ slope − slope slope = rate of change

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Comparing Properties of Two Functions - Independent Practice Worksheet

Complete all the problems.

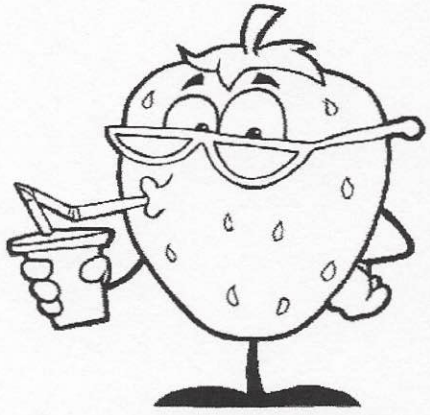
1. Compare the two linear functions listed below and determine which has a negative slope.

Function 1: Chocolate

Jacob has 50 chocolates. He gives 4 chocolates per week to his friend. Let y be the chocolate remaining as a function of the number of weeks, x.

x	0	1	2	3
y	50	46	42	38

Function 2: Cold drinks



Ava has 10 cold drinks at the start of the day. She purchases 2 cold drinks per day for the shop keeper. Write the rule for the total number of cold drink as a function of the number of the day (d). $c = 10 + 2d$

2. Compare the following functions to determine which has the greater rate of change.

Function 1: $y = 2x + 6$

Function 2: $y = 6x + 10$

3. Compare the two linear functions listed below and determine which has a negative slope

Function 1: Toys

William is a toy shop keeper. He has 30 toys at the start of the day. He sold 6 toys per day. Write the rule for the total number of toys as a function of the number of days (d). $c = 30 - 6d$

Function 2: Balloons

Denial has 20 balloons at the start of the day. He blows up 5 balloons per day. Write the rule for the total number of balloons as a function of the number of the days (d). $c = 20 + 5d$

Name _____ Date _____

4. Compare the following functions to determine which has the greater rate of change.

Function 1: Apples

Abigail has 16 apples. She eats 2 apples per day. Let y be the apples remaining as a function of the number of day, x.

x	0	1	2	3
y	16	14	12	10

Function 2: Potatoes

Jayden has 12 potatoes. He buys 3 potatoes per week. Let y be the potato remaining as a function of the number of week, x.

x	0	1	2	3
y	12	15	18	21

5. Compare the two linear functions listed below and determine which has a negative slope.

Function 1: Pencil

Devin has $40. He purchases pencils for 3 weeks. Let y be the money remaining as a function of the number of weeks, x.

x	0	1	2	3
y	40	37	34	31

Function 2: Ball

Jimmy has 11 balls at the start of the day. He purchases 4 balls per day for the shop keeper. Write the rule for the total number of balls as a function of the number of the days (d). $c = 11 + 4d$

Name _____ Date _____

6. Compare the following functions to determine which has the greater rate of change.

Function 1: $y = 4x + 7$

Function 2: $y = 3x + 9$

7. Compare the following functions to determine which has the greater rate of change.

Function 1: Books

Jeffery has $60. He buys books at the rate of $10 per day. Let y be the money remaining as a function of the number of day, x.

x	0	1	2	3
y	60	50	40	30

Function 2: Flower

Jayden has 10 flowers. He buys 5 flowers per week. Let y be the flowers remaining as a function of the number of weeks, x.

x	0	1	2	3
y	10	15	20	25

8. Compare the two linear functions listed below and determine which has a negative slope

Function 1: Yogurt

Randall has $25. He buys yogurt for $5 per day. Write the rule for the total money spent as a function of the number of the days (d). $c = 25 - 5d$

Function 2: Star Fish

Anderson has 25 star fish. He purchases 5 star fishes per day. Write the rule for the total number of star fish as a function of the number of the days (d). $c = 25 + 5d$

Name _____ Date _____

9. Compare the two linear functions listed below and determine which has a negative slope

Function 1: Cap

Elvis has $20. He purchases caps for $4 per day. Write the rule for the total number of caps as a function of the number of the days (d). $c = 20 - 4d$

Function 2: Cookies

Roger has 20 cookies at the start of the day. He made 10 cookies per day. Write the rule for the total number of cookies as a function of the number of the day (d). $c = 20 + 10d$

10. Compare the following functions to determine which has the greater rate of change.

Function 1: $y = 7x + 4$

Function 2: $y = 2x + 8$

Name _____ Date _____

Understanding the y-Intercept - Independent Practice Worksheet

Complete all the problems.

1. Killen is a singer. Killen earned $15 for singing 3 songs. Then after one month he earned $20 for singing 4 songs. How much money does Killen earn per song?

2. Phoenix brought 2 eggs per day during an office trip. How many days will Phoenix have to spend on the office trip before he will have brought a total of 10 eggs? Write and solve an equation to find the answer.

3. Fred buys candies. He buys 2 candies for a dollar and gets 3 candies free on every purchase. Write an expression representing total candies Fred has, in which total number of candies are represented by c and the number of dollars represented by d.

4. Herald hired a bike service. The company charges $15 per hour and $10 for service tax. Write an expression for the cost of one bike which is represented by C. The number of hours are represented by h.

5. Javier has a fan shop. Javier sold 3 table fans in one day. If he continues at this rate, how many fans will he sell in 5 days? Solve an equation to find answer.

6. Macy works in a school as an English teacher. She received $18 in 3 hours. Then after one week, she received $24 in 4 hours. How much money does Macy earn per hour?

7. Harry's restaurant bill includes $4 for tax and $6 per burger. Write an equation that would help you to calculate the bill total.

8. Rafael eats 4 bananas each week. Write an equation that shows the relationship between the number of weeks (x) and the total number of bananas (y).

9. Jack is a sales person. He gets $30 monthly and $2 per packet sold. Write an equation to show his income earned.

10. On Monday Harper solves 6 math questions in one hour. If he continues at this rate, how many will he solve in 6 hours?

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Using Similar Triangles to Find Slope - Independent Practice

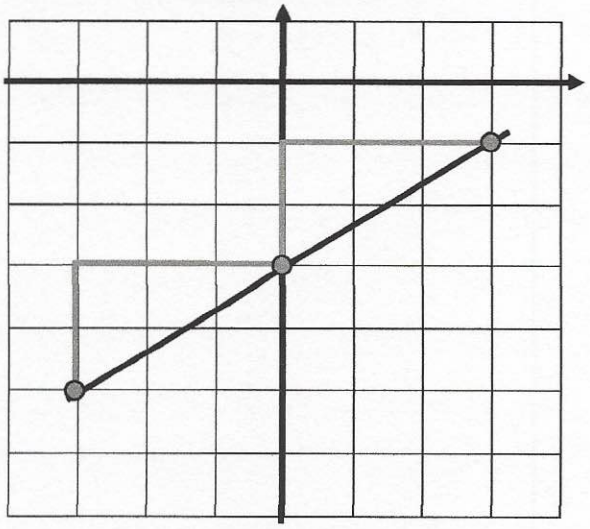
Complete all the problems.

$m = \frac{\Delta Y}{\Delta X} = \frac{y_2 - y_1}{x_2 - x_1}$

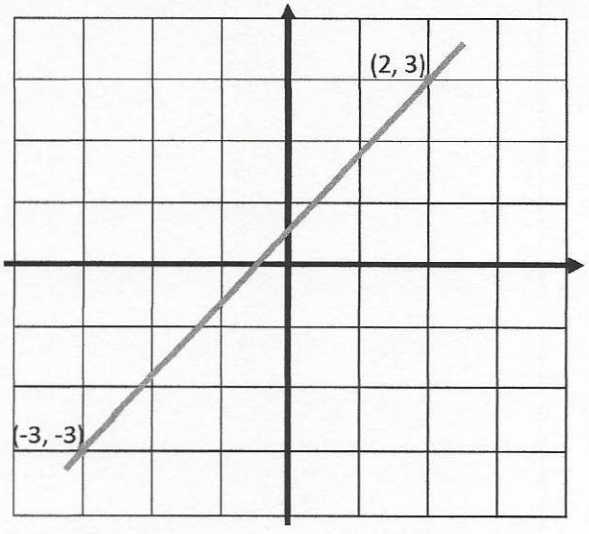
1. a. Find the slope of the line using the similar triangles as a guide.

   b. Write the equation of the line.

$y = mx + b$

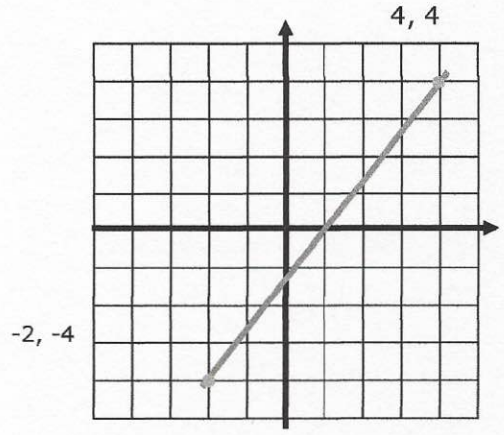


2. Write an equation to represent this graph:



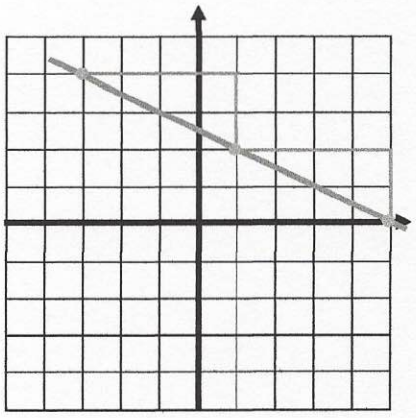
Name _____ Date _____

3. Write an equation to represent this graph:

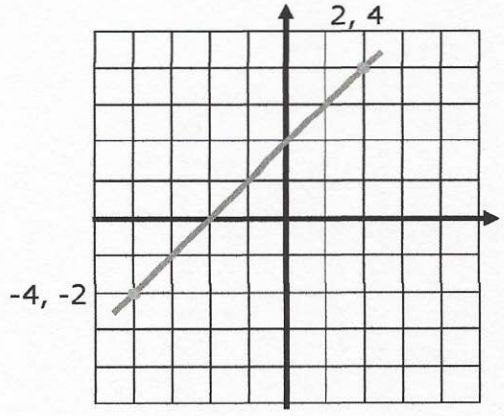


4. a. Find the slope of the line using the similar triangles as a guide.

b. Write the equation of the line.

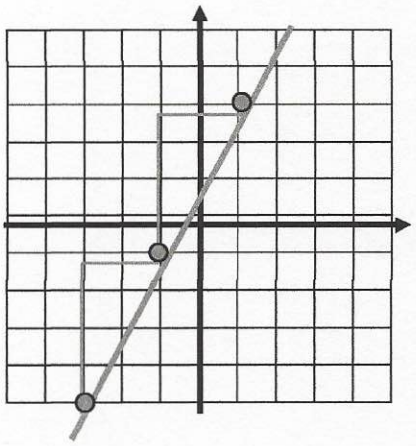


5. Write an equation to represent this graph:

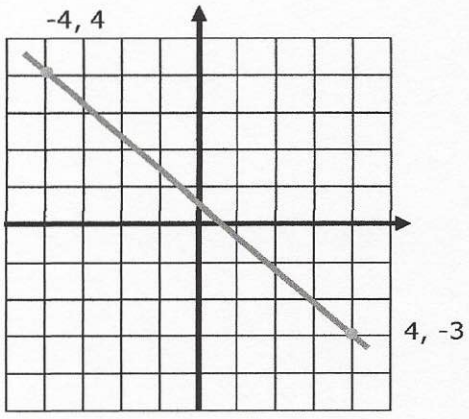


Name _____ Date _____

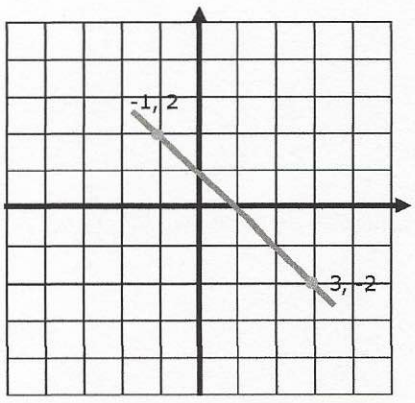
6. Find the slope of the line using the similar triangles as a guide.



7. Write an equation to represent this graph:



8. Write an equation to represent this graph:



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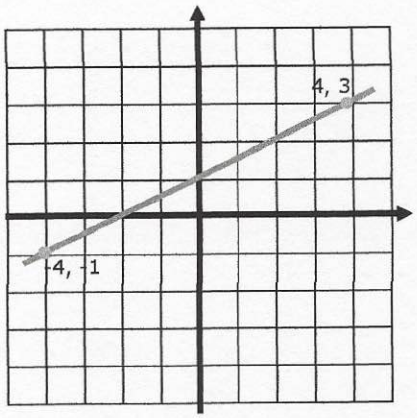
9. Write an equation to represent this graph.



10. a. Find the slope of the line using the similar triangles as a guide.

b. Write the equation of the line.