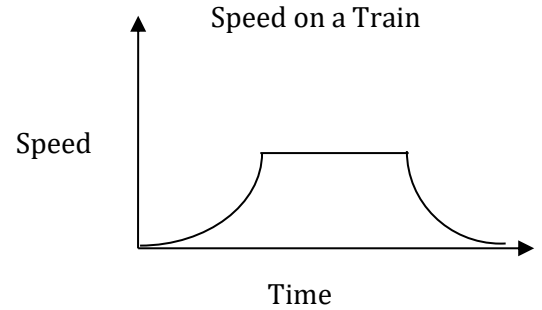


Name _____

Functions Worksheet 2

Use the graph at the right to answer questions 1 – 3.

1. Does the flat part of the graph mean the train is stopped?
2. Why is the graph curved instead of a straight slanted line?



3. _____ True/False The shape of the graph tells us that the train went up a hill, traveled on a flat surface, then traveled back down the hill.
4. Determine whether the relation is a function.
 $\{(-4, 7), (-3, 9), (2, 8), (1, 7), (2, 6), (-1, 5)\}$

5. Find the range for the equation $y = -\frac{1}{2}x + 10$ if the domain is $\{2, 8, 15, 40\}$.

6. Use the function $f(x) = \frac{3}{4}x - 9$ to find each of the following:

a. $f(8) =$ _____

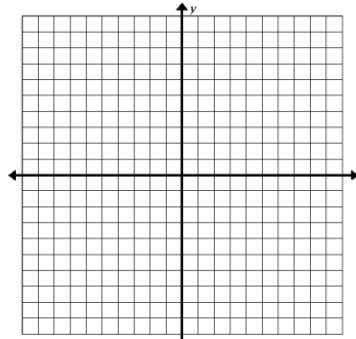
b. $f(12) =$ _____

c. $f(-6) =$ _____

Make a table of values. Use the table to graph the function.

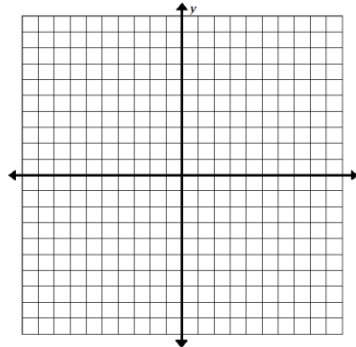
7. $y = 4x + 1$

x	y



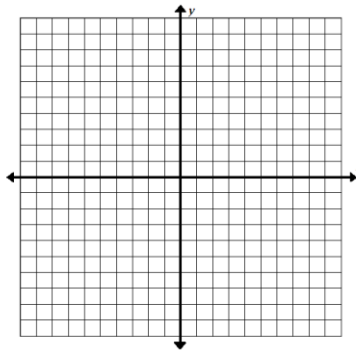
8. $y = \frac{1}{4}x - 6$

x	y



9. $f(x) = |x| - 1$

x	y



Write a function for each table.

10.

x	y
1	3
2	6
3	9
4	12

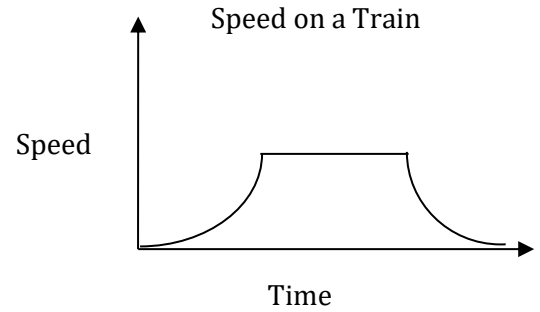
11.

x	y
-2	15
0	17
2	19
4	21

12. A car rental company charges \$15 per day for renting a car plus \$0.22 per mile. Write a function to represent the total cost of renting a car for the day, $C(m)$, as a function of m , the number of miles driven.

Functions Worksheet 2 Answers

Use the graph at the right to answer questions 1 – 3.



1. Does the flat part of the graph mean the train is stopped?

No, it is traveling at a constant speed.

2. Why is the graph curved instead of a straight slanted line?

The train is accelerating.

3. _____ True/False The shape of the graph tells us that the train went up a hill, traveled on a flat surface, then traveled back down the hill.

4. Determine whether the relation is a function.
 $\{(-4, 7), (-3, 9), (2, 8), (1, 7), (2, 6), (-1, 5)\}$

No, 2 has both 6 and 8 as outputs.

5. Find the range for the equation $y = -\frac{1}{2}x + 10$ if the domain is $\{2, 8, 15, 40\}$.

$$(2,9), (8,6), \left(15, \frac{5}{2}\right), (40, -10)$$

Range: $\{-10, \frac{5}{2}, 6, 9\}$

6. Use the function $f(x) = \frac{3}{4}x - 9$ to find each of the following:

a. $f(8) = -3$

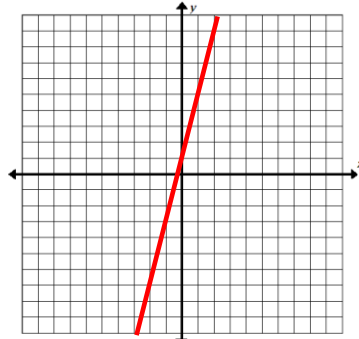
b. $f(12) = 0$

c. $f(-6) = -\frac{27}{2} = -13\frac{1}{2}$

Make a table of values. Use the table to graph the function. *Sample values are listed in the table.*

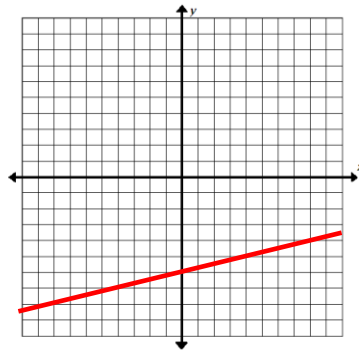
7. $y = 4x + 1$

x	y
-1	-3
0	1
1	5



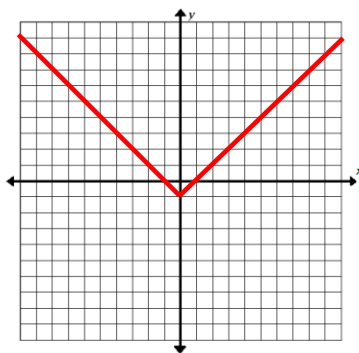
8. $y = \frac{1}{4}x - 6$

x	y
-4	-7
0	-6
4	-5



9. $f(x) = |x| - 1$

x	y
-1	0
0	-1
1	0



Write a function for each table.

10.

x	y
1	3
2	6
3	9
4	12

$y = 3x$

11.

x	y
-2	15
0	17
2	19
4	21

$y = x + 17$

12. A car rental company charges \$15 per day for renting a car plus \$0.22 per mile. Write a function to represent the total cost of renting a car for the day, $C(m)$, as a function of m , the number of miles driven.

$C(m) = 0.22m + 15$