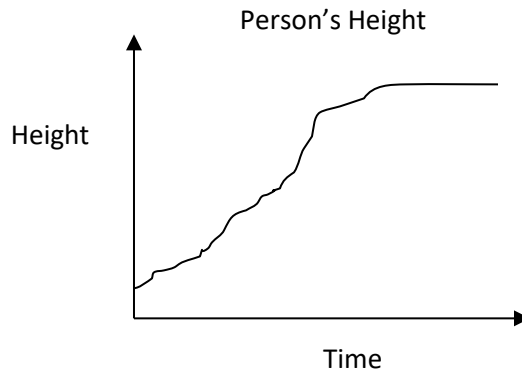


Name _____

Functions Worksheet 1

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

1. Why does this graph not start at zero?
2. Why is the graph not a straight slanted line?



3. What does the flat part at the top of the graph represent?

4. Determine whether the relation is a function.
 $\{(4, 5), (5, 1), (7, 8), (8, 9), (9, 8), (12, 6)\}$

5. Find the range for the equation $y = -2x + 5$ if the domain is $\{3, 5, 17, 20\}$.

6. Use the function $f(x) = \frac{1}{2}x - 3$ to find each of the following:

a. $f(6) =$ _____

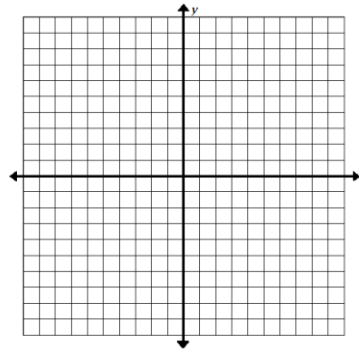
b. $f(9) =$ _____

c. $f(-4) =$ _____

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

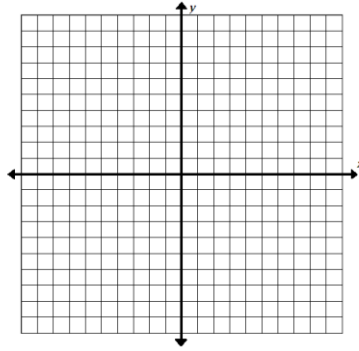
7. $y = 3x - 6$

x	y



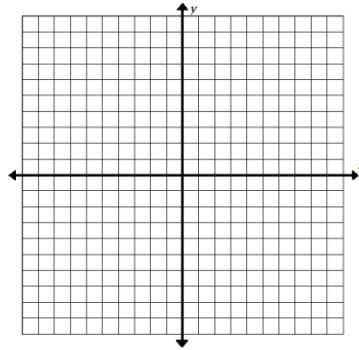
8. $y = \frac{2}{3}x - 1$

x	y



9. $f(x) = |x| + 5$

x	y



Write a function for each table.

10.

x	y
1	-6
2	-5
3	-4
4	-3

11.

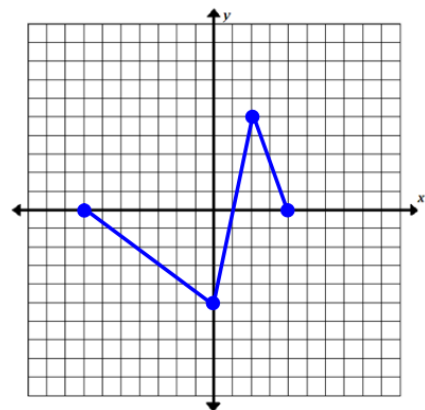
x	y
-2	-1
-1	-0.5
0	0
1	0.5

Identify the domain and range for the function pictured at the right.

12.

Domain:

Range:



Functions Worksheet 1 Answers

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

1. Why does this graph not start at zero?

A person is not zero inches when they are born.

2. Why is the graph not a straight slanted line?

People do not always grow at a perfectly steady rate.

3. What does the flat part at the top of the graph represent?

The person has stopped growing.

4. Determine whether the relation is a function.

$\{(4, 5), (5, 1), (7, 8), (8, 9), (9, 8), (12, 6)\}$

Yes, for every input there is exactly one output.

5. Find the range for the equation $y = -2x + 5$ if the domain is $\{3, 5, 17, 20\}$.

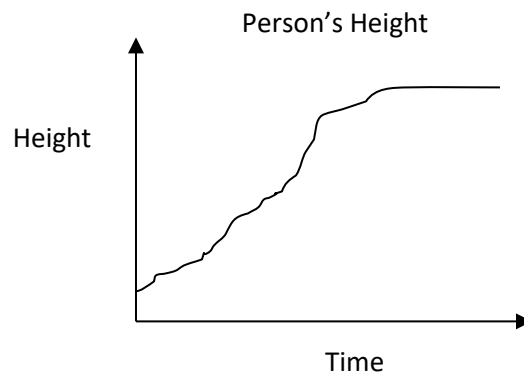
$(3, -1), (5, -5), (17, -29), (20, -35)$

Range: $\{-35, -29, -5, -1\}$

6. Use the function $f(x) = \frac{1}{2}x - 3$ to find each of the following:

a. $f(6) = 0$

b. $f(9) = \frac{3}{2}$

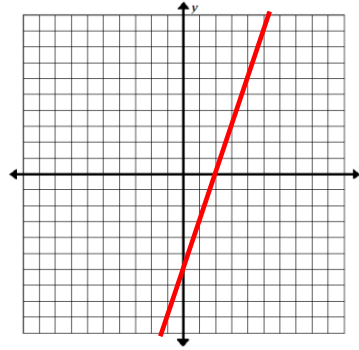


c. $f(-4) = -5$

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

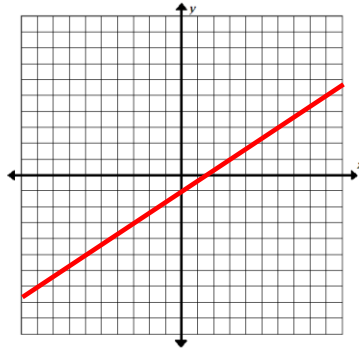
7. $y = 3x - 6$

x	y
-1	-9
0	-6
1	-3



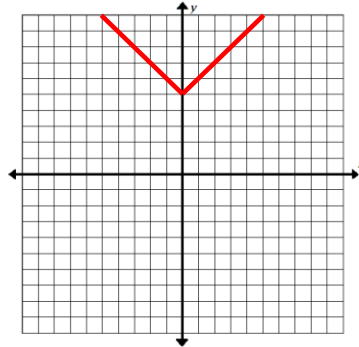
8. $y = \frac{2}{3}x - 1$

x	y
-3	-3
0	-1
3	1



9. $f(x) = |x| + 5$

x	y
-1	6
0	5
1	6



Write a function for each table.

10.

$y = x - 7$

x	y
1	-6
2	-5
3	-4
4	-3

11.

x	y
-2	-1
-1	-0.5
0	0
1	0.5

$y = \frac{1}{2}x$

Identify the domain and range for the function pictured at the right.

12.

Domain: $-7 \leq x \leq 4$

Range: $-5 \leq y \leq 5$

