

Name: _____

Period: _____

Domains, Ranges, and Functions Homework 6Hb

For the following sets of points, write them in a **table**, plot them on a **graph**, and say what the **domain** and **Range** of each set of points is.

1. $\{ (4,3), (-2,2), (5,6) \}$

2. $\{ (5,-7), (-1,4), (0,-5), (-2,3) \}$

3. $\{ (0,0), (-3,2), (6,4), (-1,1) \}$

4. $\{ (4, -3), (1,3), (7,-2), (2,-2), (1,5) \}$

Mapping: Remember that an ordered pair has an x-value and a y-value. (We have also been using $f(x)$ instead of y when talking about functions.) Tables, graphs, and ordered pairs help us see what x value is paired with, or “mapped” to, an $f(x)$ value. We can do that in another way too. It is called “Mapping.” It is done by drawing an arrow from each x -value in the domain to possible $f(x)$ values in the range of a function.

Example:

Map the following domain to the corresponding $f(x)$ values.

$\{ (4, -1), (8,9), (-2, -6), (7, -3) \}$

Answer

Domain (x-values)	Range $f(x)$
-2	-6
4	-3
7	-2
8	-1
	9

Domain (x-values)	Range $f(x)$
-2	-6
4	-3
7	-2
8	-1
	9

Map the following domain to the corresponding $f(x)$ values.

5. $\{ (4,3), (-2,2), (5,6) \}$

6. $\{ (5,-7), (-1,4), (0,-5), (-2,3) \}$

Domain (x-values)	Range $f(x)$
-2	2
4	3
5	6

Domain (x-values)	Range $f(x)$
-2	-7
0	-5
-1	3
5	4

7. $\{ (0,0), (-3,2), (6,4), (-1,1) \}$

8. $\{ (4, -3), (1,3), (7,-2), (2,-2), (1,5) \}$

Domain (x-values)	Range $f(x)$
-3	0
-1	1
0	2
6	3
	4

Domain (x-values)	Range $f(x)$
1	-3
2	-2
4	3
7	5

For the following stories, tell me if the function that best represents these stories is **discrete** or **continuous**.

9. Increasing the temperature of a liquid inside a sealed container increases the pressure inside a sealed container.

10. Mike's cellphone is part of a family plan. If he uses more minutes than his share, then there are fewer minutes available for the rest of the family.

11. Julian is buying concert tickets for himself and his friends. The more concert tickets he buys, the greater the cost.

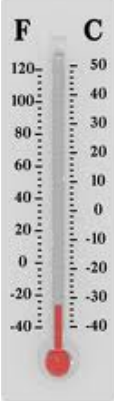
12. A store is having a sale over Labor Day weekend. The more purchases, the greater the profits.

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Find the Domain and Range

For each situation/table/graph/set below, state what the domain and range are. Also say if the function is continuous or discrete. Finally, state if the situation is arithmetic, geometric, linear, exponential, or none of the above.

<p>1. The dance committee is selling tickets for the Fall Ball. The more tickets they sell, the greater the amount of money they can spend for decorations. There are 1,500 students at the school, and the ballroom can hold 2,000 students. Each couple only needs 1 ticket, and each ticket sells for \$15.</p> <p>Domain: Range: Continuous / Discrete Arithmetic/Geometric/Linear/Exponential/ None</p>	<p>2. You are reading the book Warm Bodies. It takes you an average of 5 minutes to read 3 pages. The book has 256 pages.</p> <p>Domain: Range: Continuous / Discrete Arithmetic/Geometric/Linear/Exponential/ None</p>
<p>3. You are playing “Plants Vs. Zombies.” A sunflower in the game will produce 1 sun every 30 seconds. You have 3 minutes in the round to defeat all of the zombies, before they defeat you.... Dun dun dun....</p> <p>Domain: Range: Continuous / Discrete Arithmetic/Geometric/Linear/Exponential/ None</p>	<p>4. The warmer it is outside, the longer the red line of this thermometer. This thermometer is 6 inches long.</p>  <p>Domain: Range: Continuous / Discrete Arithmetic/Geometric/Linear/Exponential/ None</p>
<p>5. $\{ (0,3), (1,6), (2, 9), (3, 12) \}$</p> <p>Domain: Range: Continuous / Discrete Arithmetic/Geometric/Linear/Exponential/ None</p>	<p>6. $\{ \dots(0,3), (1,6), (2, 9), (3, 12)\dots \}$</p> <p>Domain: Range: Continuous / Discrete Arithmetic/Geometric/Linear/Exponential/ None</p>

7.

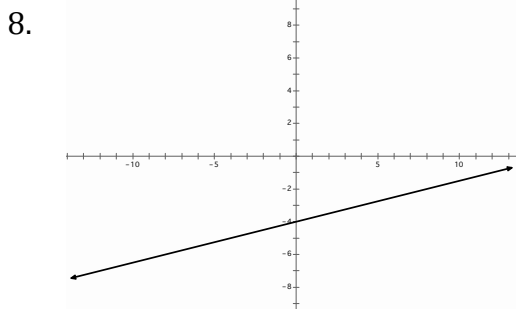
x	f(x)
1	3
2	9
3	27
4	81
...	...

Domain:
 Range:
 Continuous / Discrete
 Arithmetic/Geometric/Linear/Exponential/ None

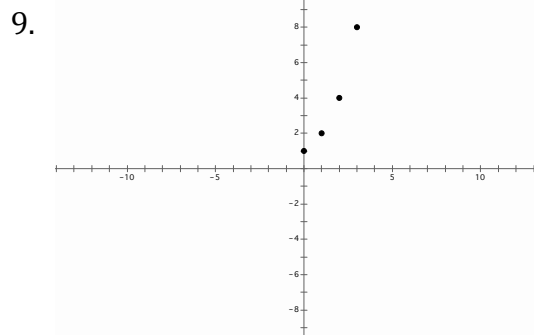
8.

x	f(x)
...	...
1	3
2	9
3	27
...	...

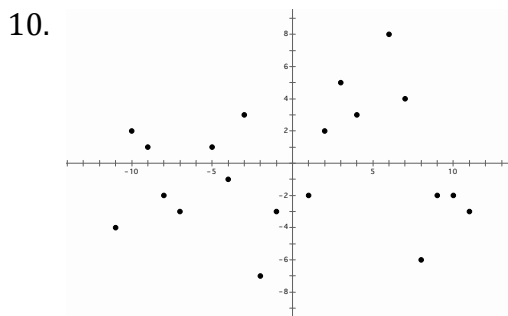
Domain:
 Range:
 Continuous / Discrete
 Arithmetic/Geometric/Linear/Exponential/ None



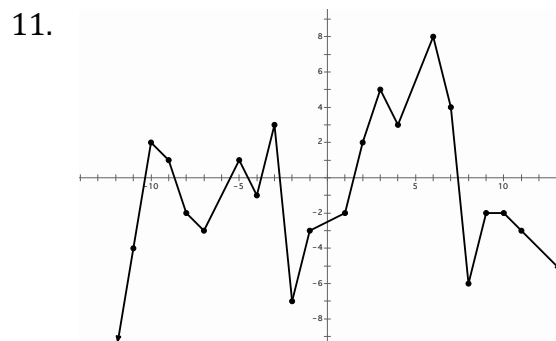
Domain:
 Range:
 Continuous / Discrete
 Arithmetic/Geometric/Linear/Exponential/ None



Domain:
 Range:
 Continuous / Discrete
 Arithmetic/Geometric/Linear/Exponential/ None



Domain:
 Range:
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Domain:
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 Arithmetic/Geometric/Linear/Exponential/ None