

Algebra 1
Section 3.2 Worksheet #2

Name: _____

1. Describe the difference between a discrete domain and a continuous domain?

2. From the given domain and range of each function, determine if the domain is discrete or continuous.

A. Cost of cheddar cheese.



Domain: $\{x \mid 0 \leq x \leq 4\}$
 Range: $\{y \mid 0 < y \leq 8\}$

Circle: Discrete or Continuous

Explain: _____

B. Cost of an adult concert ticket



Domain: $\{x \mid x=0, 1, 2, 3, 4\}$
 Range: $\{y \mid y=0, 4, 8, 12, 14\}$

Circle: Discrete or Continuous

Explain: _____

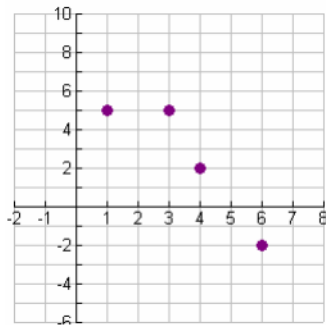
For problems 3-8,

a) Find the domain and range.

b) Determine if the relation/graph is discrete or continuous .

c) Decide if the relation/graph is a function or not a function.

3.



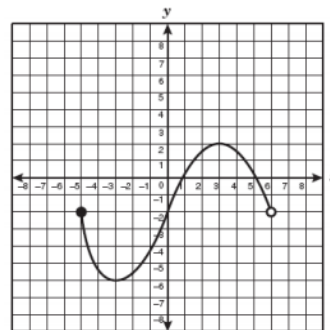
Domain: _____

Range: _____

Function: _____

Circle:
 Discrete or Continuous

4.



Domain: _____

Range: _____

Function: _____

Circle:
 Discrete or Continuous

5.

Domain: _____

Range: _____

Function: _____

Circle:
Discrete or Continuous

6.

Domain: _____

Range: _____

Function: _____

Circle:
Discrete or Continuous

7.

Domain: _____

Range: _____

Function: _____

Circle:
Discrete or Continuous

8.

Domain: _____

Range: _____

Function: _____

Circle:
Discrete or Continuous

9. You conduct an experiment on the speed of sound waves in dry air at 86° F. You record the data in the table below. Which of the following is true?

Input Time, t (seconds)	Output Distance, d (miles)
2	0.434
4	0.868
6	1.302
8	1.736
10	2.170

- | | |
|--|--|
| a. The domain is $\{t \mid 2 \leq t \leq 10\}$ and it is discrete. | b. The domain is $\{t \mid 2 \leq t \leq 10\}$ and it is continuous. |
| c. The domain is $\{d \mid 0.434 \leq d \leq 2.17\}$ and it is discrete. | d. The domain is $\{d \mid 0.434 \leq d \leq 2.17\}$ and it is continuous. |

For problems 10-13, graph each function. State if it is continuous or discrete.

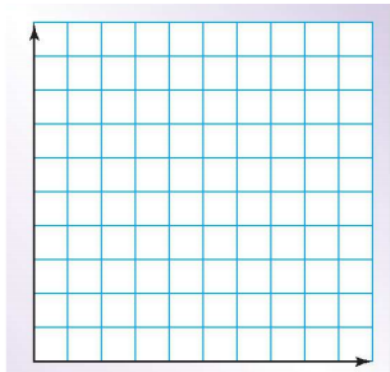
10.

Time, t (seconds)	Distance, d (miles)
2	0.434
4	0.868
6	1.302
8	1.736

Circle:

Discrete or
Continuous

Explain:



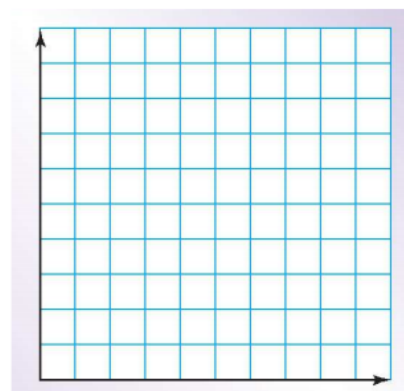
11.

The number of cereal bar	calories
0	0
2	10
4	20
6	30

Circle:

Discrete or
Continuous

Explain:



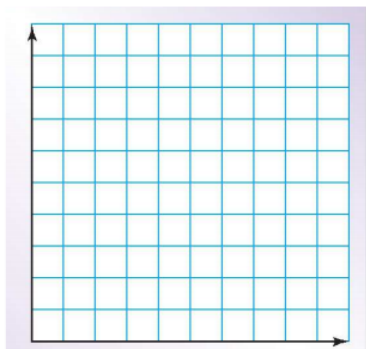
12.

Input Years, x	Output Height of a Tree, y (feet)
0	3
1	6
2	9

Circle:

Discrete or
Continuous

Explain:



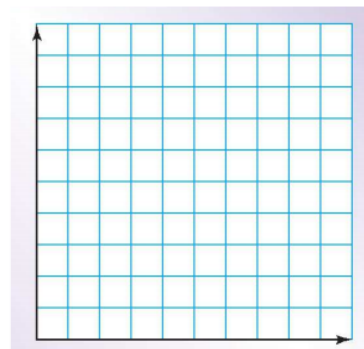
13.

Input Bags, x	Output Marbles, y
2	20
4	40
6	60

Circle:

Discrete or
Continuous

Explain:



14. A 20-gallon bathtub is draining at a rate of 2.5 gallons per minute. The number g of gallons remaining is a function of the number m of minutes.

a. Is the domain discrete or continuous?

b. What is the dependent variable and independent variable?