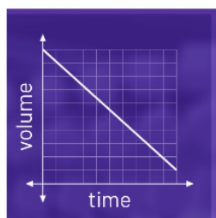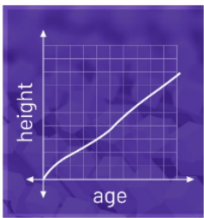# Functions – Day 5

Discrete & Continuous

Continuous Graph

A graph that is unbroken.
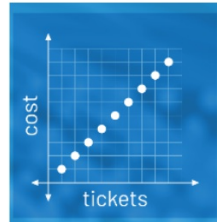
Examples:

height / age graph

volume / time graph

Discrete Graph

A graph composed of distinct, isolated points.

Examples:

cost / tickets graph

samples / customer graph
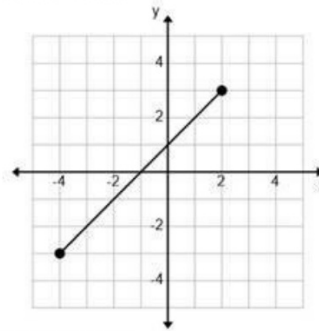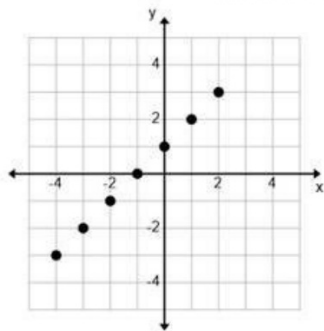
What is the **SAME**?

What is **DIFFERENT**?

Domain:

Range:

Domain:

Range:

What is the SAME?
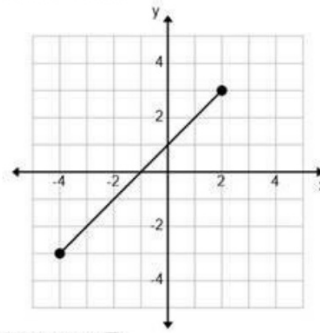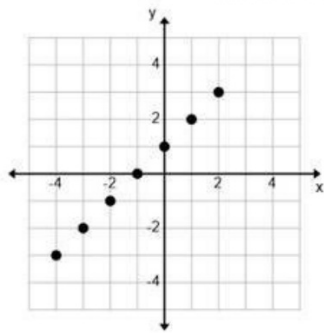
What is DIFFERENT?

Domain: **-4, -3, -2, -1, 0, 1, 2**

Range: **-3, -2, -1, 0, 1, 2, 3**

Domain: **-4 ≤ x ≤ 2**

Range: **-3 ≤ y ≤ 3**

Is the graph discrete or continuous?
Identify the domain & range.
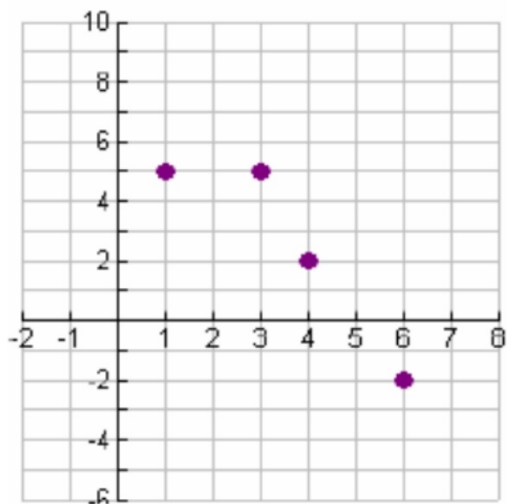
Domain:

Range:

Is the graph discrete or continuous?
Identify the domain & range.

Domain: **1, 3, 4, 6**

Range: **5, 2, -2**

Is the graph discrete or continuous?
Identify the domain & range.

Domain:

Range:

Is the graph discrete or continuous?
Identify the domain & range.

Domain: $-6 \leq x \leq 5$
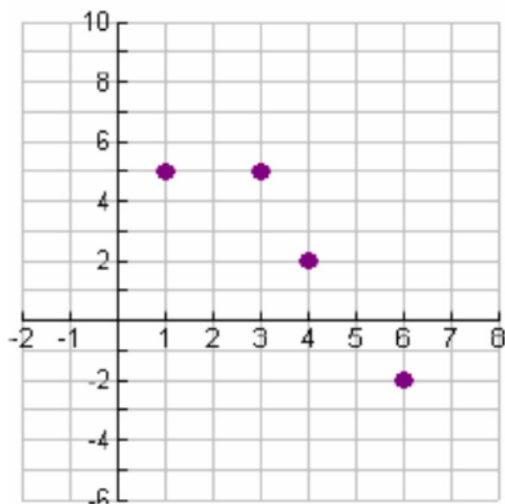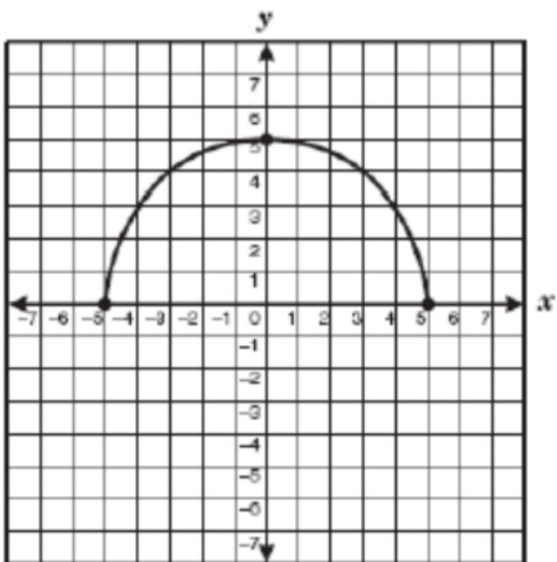
Range: $0 \leq y \leq 5$

Is the graph discrete or continuous?
Identify the domain & range.

Domain:

Range:

Is the graph discrete or continuous?
Identify the domain & range.

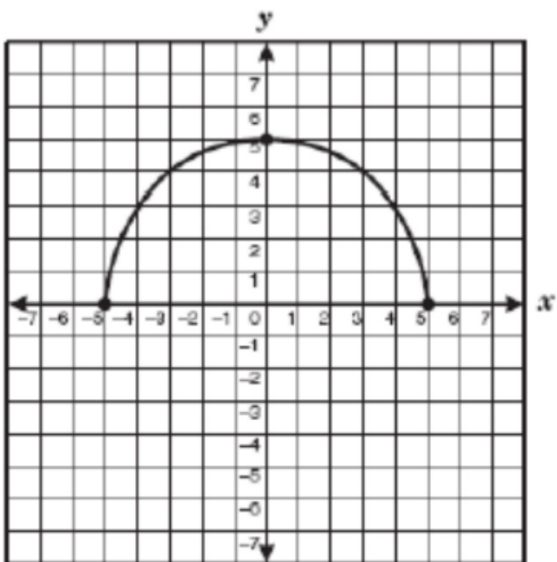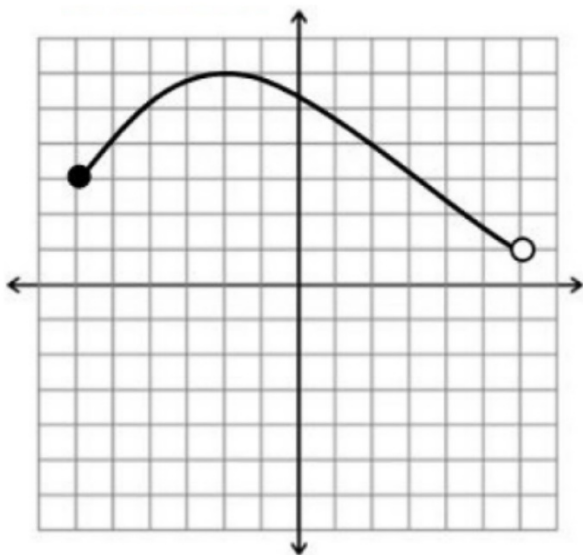Domain: $-6 \leq x < 6$
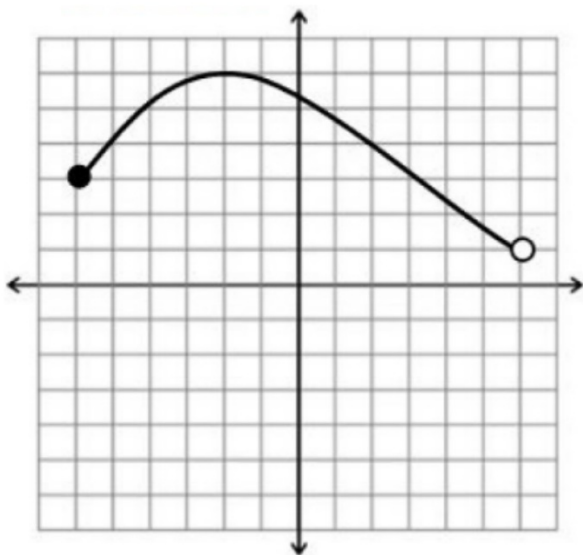
Range: $1 < y \leq 6$
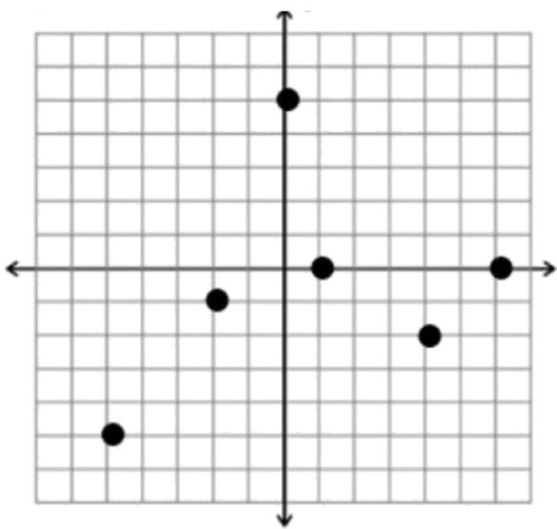
Is the graph discrete or continuous?
Identify the domain & range.

Domain:

Range:

Is the graph discrete or continuous?
Identify the domain & range.
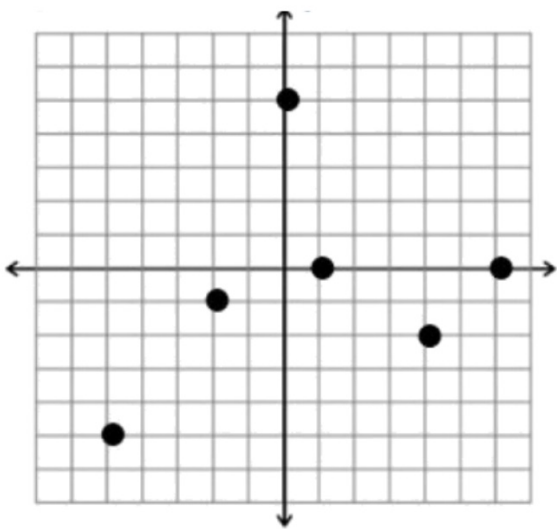
Domain: **-5, -2, 0, 1, 4, 6**

Range: **-5, -2, -1, 0, 5**

Decide whether the data would be discrete or continuous.

Discrete

Continuous

The length of your hair

How many pets you have

Buying boxes of cereal at the store

Your height

Time in a race

Buying pounds of bananas at the store

Result of rolling 2 dice

Your dog's weight

Number of students in a class

Your shoe size

Decide whether the data would be discrete or continuous.

Discrete

How many pets you have	Buying boxes of cereal at the store
Your shoe size	
Result of rolling 2 dice	Number of students in a class

Continuous

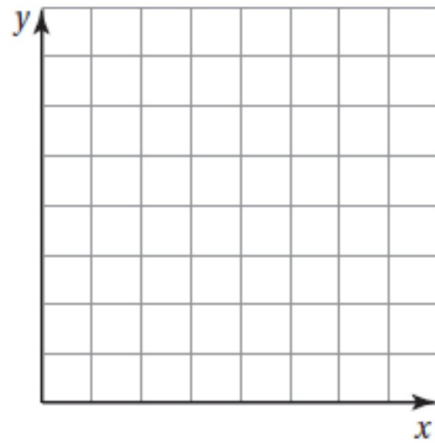|	
The length of your hair	Buying pounds of bananas at the store
Your height	
Your dog's weight	Time in a race

Graph the function. Is the domain of the graph discrete of continuous? Find the domain and range. Write a function rule.

Tickets	Cost
0	0
1	15
2	30
3	45

Graph the function. Is the domain of the graph discrete of continuous? Find the domain and range. Write a function rule.

Tickets	Cost
0	0
1	15
2	30
3	45

Discrete

$y = 15x$

Domain: 0, 1, 2, 3...
Range: 0, 15, 30, 45...

Graph the function. Is the domain of the graph discrete of continuous? Find the domain and range. Write a function rule.

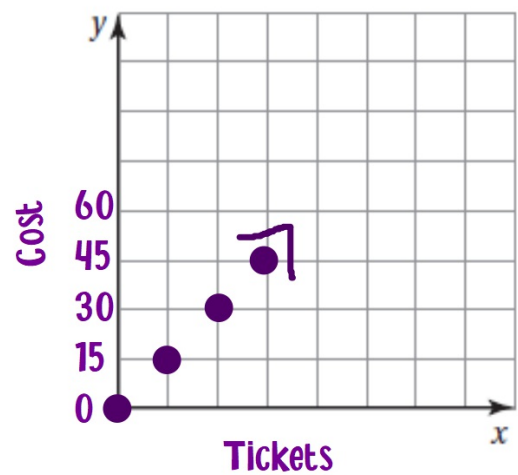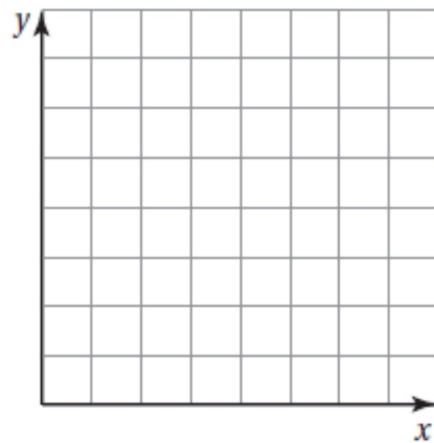| Minutes Exercised	Calories Burned
0	20
5	70
10	120
15	170

Graph the function. Is the domain of the graph discrete of continuous? Find the domain and range. Write a function rule.
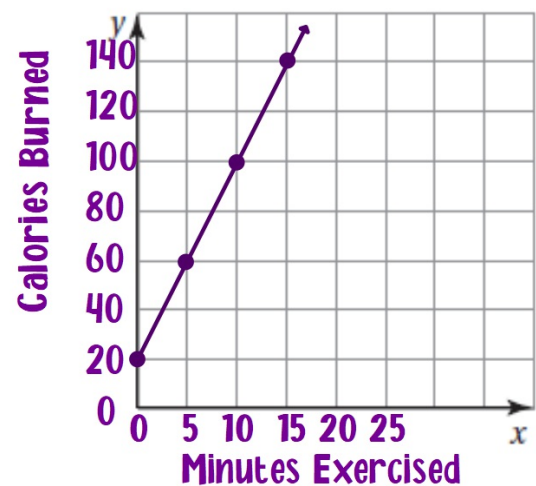
Minutes Exercised	Calories Burned
0	20
5	60
10	100
15	140

Continuous

$$y = 40x + 20$$

Domain: $x \geq 0$
Range: $y \geq 20$

Homework:

Discrete & Continuous Worksheet