1. The student council is holding a bake sale so they can raise money to have a school dance. The more items they sell, the more money they will make. Identify the independent and dependent variables.

IV: Sales DV: $

The relation to the right is a function: { (0,3), (2,9), (-3,5), (-2,2), (1,1)}

2. Create another ordered pair that would keep the relation a function

(-7,2)

3. Create another ordered pair that would make the relation **not** a function

(2,10)

Domain and Range

The **domain** of a relation is the set of all inputs or x - coordinates

The **range** of a relation is the set of all outputs, or y - coordinates

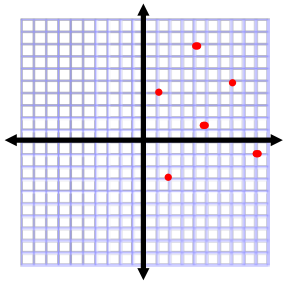
Relations can either be **continuous** or **discrete.**

Discrete

- Results of counting

- Can take only certain values

Looks like:



Examples:

# of pizza

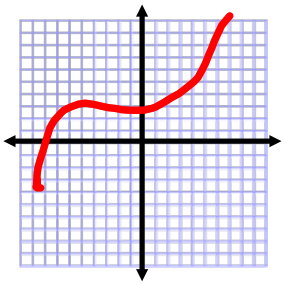
# of students in class

Continuous

- Results of measuring

- Can take any value within a certain range

Looks like:

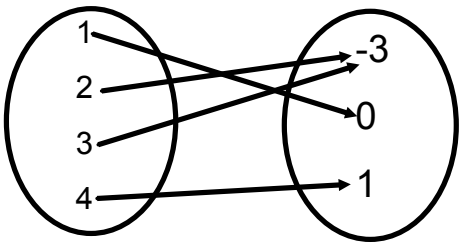


Examples:
Weight of baby

Time spent in a car

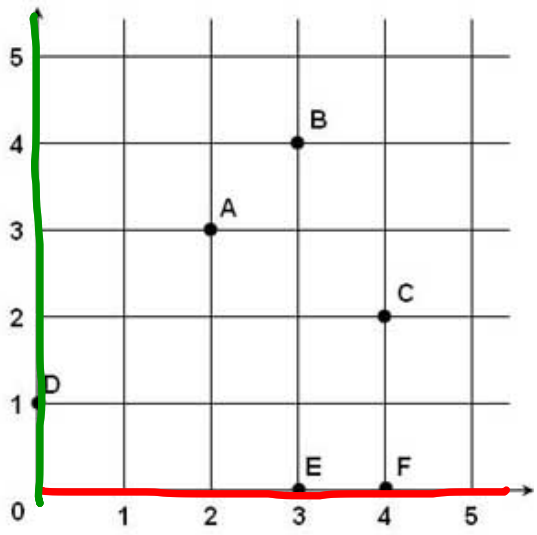
Examples of discrete relations:

1. { (0,3), (2,9), (-3,5), (0,2), (1,1)}
   - Is it a function? No
   - Domain: 0, 2, -3, 1
   - Range: 3, 9, 5, 2, 1

2. 

   - Is it a function? Yes
   - Domain: 1, 2, 3, 4
   - Range: -3, 0, 1

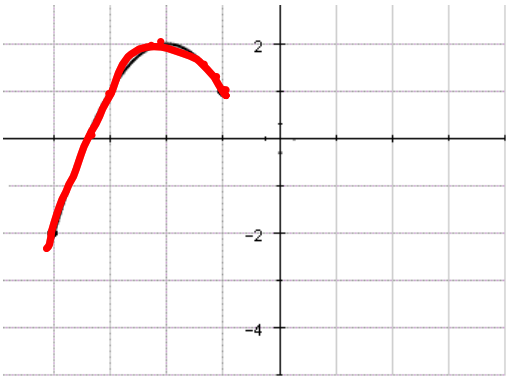
3.



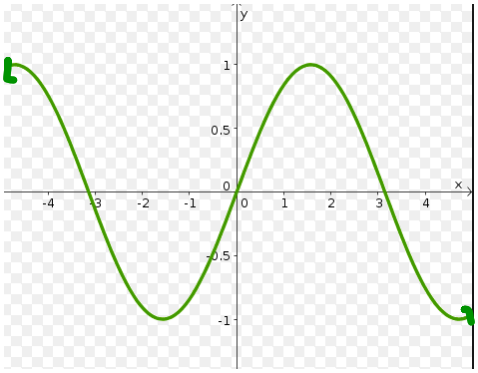
- Is it a function? No
- Domain: 0, 2, 3, 4
- Range: 0, 1, 2, 3, 4

Example of continuous relations:

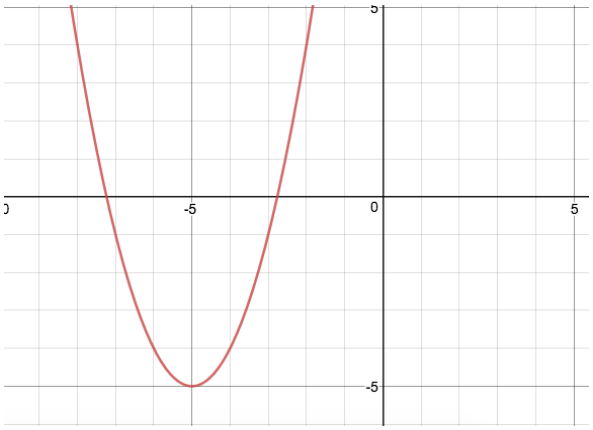
4.



- Is it a function? Yes
- Domain: $-4 \leq x \leq -1$
- Range: $-2 \leq y \leq 2$



- Is it a function? y
- Domain: $\mathbb{R}$
- Range: $-1 \leq y \leq 1$



- Is it a function? yes
- Domain: $\mathbb{R}$
- Range: $y \geq -5$ or $-5 \leq y$