

# A function

Example of a function:  $(1, 2), (-2, 5), (3, 4), (0, 2)$

Non-example of a function:  $(2, 6), (-1, 4), (2, 5), (0, 3)$

# The domain

The range

# Functions



Give the domain and range of the relation.

| x  | y   |
|----|-----|
| 5  | 11  |
| 10 | 21  |
| 0  | 0   |
| -7 | -13 |

- a. D:  $\{-7, 0, 5, 10\}$ ; R:  $\{-13, 0, 11, 21\}$
- b. D:  $\{-7, 5, 10\}$ ; R:  $\{-13, 11, 21\}$
- c. D:  $\{-13, 0, 11, 21\}$ ; R:  $\{-7, 0, 5, 10\}$
- d. D:  $\{5, 10, -7, 11, 21, -13\}$ ; R:  $\{0\}$

Give the domain and range of the relation.

| x  | y   |
|----|-----|
| 1  | 3   |
| 6  | 13  |
| 0  | 0   |
| -7 | -13 |

- D:  $\{-13, 0, 3, 13\}$ ; R:  $\{-7, 0, 1, 6\}$
- D:  $\{-13, 3, 13\}$ ; R:  $\{-7, 1, 6\}$
- D:  $\{-7, 0, 1, 6\}$ ; R:  $\{-13, 0, 3, 13\}$
- D:  $\{0\}$ ; R:  $\{1, 6, -7, 3, 13, -13\}$

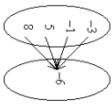
Give the domain and range of the relation. Tell whether the relation is a function.

| x | y  |
|---|----|
| 0 | -5 |
| 1 | -2 |
| 2 | 1  |
| 3 | 4  |

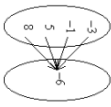
- D:  $\{-5, -2, 1, 4\}$ ; R:  $\{0, 1, 2, 3\}$   
The relation is a function.
- D:  $\{-5, -2, 1, 4\}$ ; R:  $\{0, 1, 2, 3\}$   
The relation is not a function.
- D:  $\{0, 1, 2, 3\}$ ; R:  $\{-5, -2, 1, 4\}$   
The relation is a function.
- D:  $\{0, 1, 2, 3\}$ ; R:  $\{-5, -2, 1, 4\}$   
The relation is not a function.

Identify the mapping diagram that represents the relation and determine whether the relation is a function.

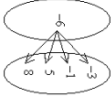
$$\{(-3, -6), (-1, -6), (5, -6), (8, -6)\}$$



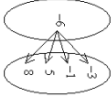
a. The relation is not a function.



b. The relation is a function.



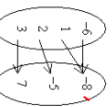
c. The relation is a function.



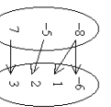
d. The relation is not a function.

Identify the mapping diagram that represents the relation and determine whether the relation is a function.

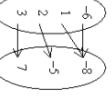
$$\{(-8, -6), (-5, 2), (-8, 1), (7, 3)\}$$



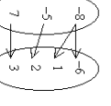
a. The relation is a function.



b. The relation is not a function.



c. The relation is not a function.



d. The relation is a function.

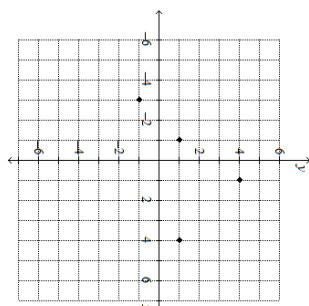
Identify the domain and range of the relation.

$$\{(-4, 2), (-7, -6), (-4, 10), (10, -8)\}$$

Use the vertical line test to determine whether the relation is a function.

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

Use the vertical line test to determine whether the relation is a function.



Use the vertical line test to determine whether the relation is a function.

