Definition: A *relation* is a set of ordered pairs (x, y)

Definition: A *relation* is a set of ordered pairs (x, y)

Definition: The *domain* of a relation is the set of x-values

Definition: A *relation* is a set of ordered pairs (x, y)

Definition: The *domain* of a relation is the set of x-values **Definition:** The *range* of a relation is the set of y-values

Definition: A *relation* is a set of ordered pairs (x, y)

Definition: The *domain* of a relation is the set of x-values

Definition: The *range* of a relation is the set of y-values

Definition: A *function* is a relation so that no two pairs have

the same x-value. That is, no x-value shows up twice.

Definition: A *relation* is a set of ordered pairs (x, y)

Definition: The *domain* of a relation is the set of x-values

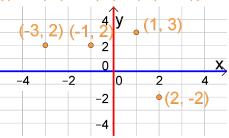
Definition: The *range* of a relation is the set of y-values

Definition: A *function* is a relation so that no two pairs have the same x—value. That is, no x—value shows up twice.

Definition: A *relation* is a set of ordered pairs (x, y)

Definition: The *domain* of a relation is the set of x-values **Definition:** The *range* of a relation is the set of y-values

Definition: A *function* is a relation so that no two pairs have the same x-value. That is, no x-value shows up twice.

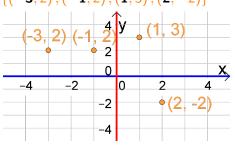


Definition: A *relation* is a set of ordered pairs (x, y)

Definition: The *domain* of a relation is the set of x-values

Definition: The *range* of a relation is the set of y-values

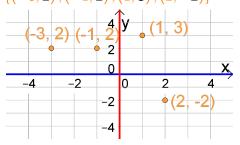
Definition: A *function* is a relation so that no two pairs have the same x—value. That is, no x—value shows up twice.



Domain =
$$\{-3, -1, 1, 2\}$$

Definition: A *relation* is a set of ordered pairs (x, y)

Definition: The *domain* of a relation is the set of x-values **Definition:** The *range* of a relation is the set of y-values **Definition:** A *function* is a relation so that no two pairs have the same x-value. That is, no x-value shows up twice.



Domain =
$$\{-3, -1, 1, 2\}$$

Range = $\{-2, 2, 3\}$

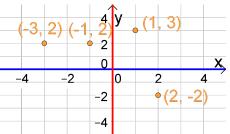
Definition: A *relation* is a set of ordered pairs (x, y)

Definition: The *domain* of a relation is the set of x-values

Definition: The *range* of a relation is the set of y-values

Definition: A function is a relation so that no two pairs have the same x—value. That is, no x—value shows up twice.

Example 1:
$$\{(-3,2), (-1,2), (1,3), (2,-2)\}$$



Domain =
$$\{-3, -1, 1, 2\}$$

Range = $\{-2, 2, 3\}$

This relation is a function.

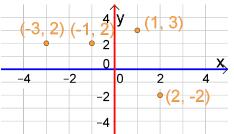
Definition: A *relation* is a set of ordered pairs (x, y)

Definition: The *domain* of a relation is the set of x-values

Definition: The *range* of a relation is the set of y-values

Definition: A *function* is a relation so that no two pairs have the same x—value. That is, no x—value shows up twice.

Example 1:
$$\{(-3,2), (-1,2), (1,3), (2,-2)\}$$



Domain =
$$\{-3, -1, 1, 2\}$$

Range =
$$\{-2, 2, 3\}$$

This relation is a function.

Note: A relation can still be a function with a repeated y-value