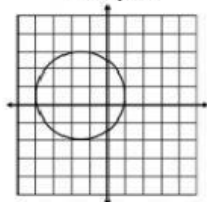


# Relations and Functions

A \_\_\_\_\_ shows a relationship between two values

## Ways to represent relations

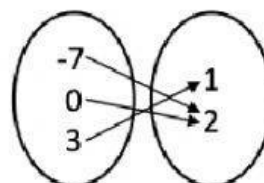
Graph



Table

| $x$ | $y$ |
|-----|-----|
| 3   | 1   |
| -2  | -4  |
| 0   | 2   |
| 3   | 6   |

Mapping



Ordered Pair

$\{(-1, 2), (0, 5), (2, 7)\}$

Equation

$$y = x^2 - 1$$

A function is a \_\_\_\_\_ that pairs each \_\_\_\_\_ with \_\_\_\_\_ output

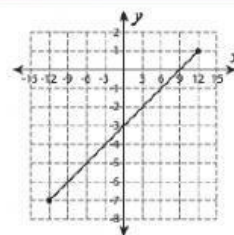
## Determine if each relation is a function

$\{(-13, 4), (7, -15), (-13, 9), (6, -12), (-18, 0)\}$

Notes:

| $x$ | $y$ |
|-----|-----|
| 9   | -18 |
| -20 | 0   |
| -6  | 1   |
| -17 | 16  |
| 9   | 17  |
| 11  | 19  |

Notes:



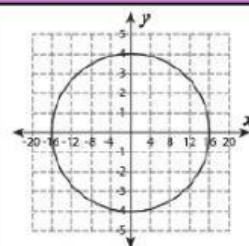
Notes:

$\{(6, 0), (-12, -16), (-6, 10), (20, -7)\}$

Notes:

| $x$ | $y$ |
|-----|-----|
| -13 | 2   |
| -10 | 8   |
| -8  | 3   |
| 12  | -9  |
| 16  | 7   |
| 18  | -2  |

Notes:



Notes:

$$y = x^2 - 1$$

Notes: