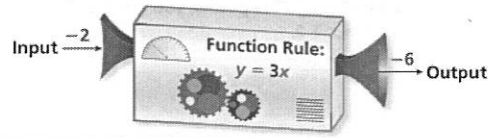


6.2 Representations of Functions

Key Idea

Functions as Equations

A **function rule** is an equation that describes the relationship between inputs (independent variable) and outputs (dependent variable).



EXAMPLE 1 – Writing Function Rules

- A. Write a function rule for “The output is five less than the input.”
- B. Write a function rule for “The output is half of the input.”
- C. Write a function rule for “The output is eight more than the input.”
- D. Write a function rule for “The output is 5 less than 2 times the input.”

EXAMPLE 2 – Evaluating Functions

Find the value of y when $x = 5$.

A. $y = 4x - 1$

B. $y = 10x$

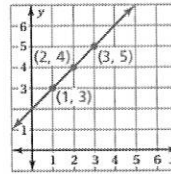
C. $y = 7 - 3x$

Key Idea

Functions as Tables and Graphs

A function can be represented by an input-output table and by a graph. The table and graph below represent the function $y = x + 2$.

Input, x	Output, y	Ordered Pair, (x, y)
1	3	(1, 3)
2	4	(2, 4)
3	5	(3, 5)

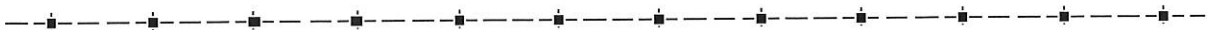
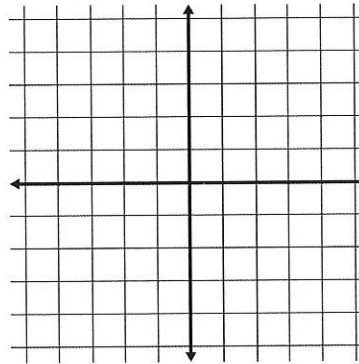


By drawing a line through the points, you graph *all* of the solutions of the function $y = x + 2$.

EXAMPLE 3 – Graphing a Function

Graph the function $y = -x - 3$ using inputs of $-1, 0, 1$ and 2 .

x	y



SUMMARY – Representations of Functions

Words: An output is 2 more than the input.

Equation: _____

Table

Mapping

Graph