

1.6

Represent Functions as Rules and Tables

Goal • Represent functions as rules and as tables.

Your Notes

VOCABULARY

Function

Domain

Range

Independent variable

Dependent variable

Example 1 *Identify the domain and range of a function*

The input-output table shows temperatures over various increments of time. Identify the domain and range of the function.

Input (hours)	0	2	4	6
Output (°C)	24	27	30	33

Solution

Domain: _____

Range: _____

Your Notes

✓ **Checkpoint** Identify the domain and range of the function.

1.

Input	4	7	11	13
Output	10	20	35	45

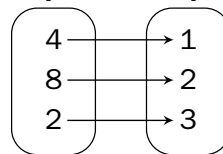
Mapping diagrams are often used to represent functions. Take note of the pairings to make your decision.

Example 2 Identify a function

Tell whether the pairing is a function. Explain your reasoning.

Solution

a. Input Output



b.

Input	Output
2	2
2	4
3	6
4	8

✓ **Checkpoint** Tell whether the pairing is a function.

2.

Input	5	5	10	15
Output	3	4	6	8

3.

Input	0	4	12	20
Output	3	5	9	13

Your Notes

A function may be represented using a rule that relates one variable to another.

FUNCTIONS

Verbal Rule

Equation

Table

The output is 2 less than the input.

Input	2	4	6	8	10
Output					

Example 3 Make a table for a function

The domain of the function $y = 3x$ is 0, 1, 2, and 3. Make a table for the function, then identify the range of the function.

Solution

x				
$y = 3x$				

The range of the function is _____.

Example 4 Write a function rule

Write a rule for the function.

Input	3	5	7	9	11
Output	6	10	14	18	22

Solution

Let x be the input and let y be the output. Notice that each output is _____ the corresponding input. So, a rule for the function is _____.

Homework

✓ **Checkpoint** Write a rule for the function. Identify the domain and the range.

4.

Yarn (yd)	1	2	3	4
Total Cost (\$)	1.5	3	4.5	6