

Section 1.3 Functions

Objective: In this lesson you learned how to evaluate functions and find their domains.

Course Number

Instructor

Date

Important Vocabulary

Define each term or concept.

Function**Domain****Range****Independent variable****Dependent variable****I. Introduction to Functions** (Pages 92–94)

A rule of correspondence that pairs items from one set with items from a different set is a _____.

In functions that can be represented by ordered pairs, the first coordinate in each ordered pair is the _____ and the second coordinate is the _____.

Some characteristics of functions are . . .

- 1)
- 2)
- 3)

To decide whether a relation is a function, . . .

If any input value of relation is matched with two or more output values, . . .

What you should learn

How to decide whether relations between two variables are functions

Some common ways to represent functions are . . .

- 1)
- 2)
- 3)
- 4)

Example 1: Decide whether the table represents y as a function of x .

| | | | | | |
|-----|----|-----|---|---|----|
| x | -3 | -1 | 0 | 2 | 4 |
| y | 5 | -12 | 5 | 3 | 14 |

II. Function Notation (Pages 94–95)

The symbol _____ is **function notation** for the value of f at x or f of x , used to describe y as a function of x . In this case, _____ is the name of the function and _____ is the value of the function at x .

What you should learn
How to use function notation and evaluate functions

Example 2: If $f(w) = 4w^3 - 5w^2 - 7w + 13$, describe how to find $f(-2)$.

A piecewise-defined function is . . .

III. The Domain of a Function (Page 96)

If x is in the domain of f , then f is said to be _____ at x .

If x is not in the domain of f , then f is said to be _____ at x .

What you should learn
How to find the domains of functions

The **implied domain** of a function defined by an algebraic expression is . . .

For example, the implied domain of the function $f(x) = \sqrt{5x - 8}$ is . . .

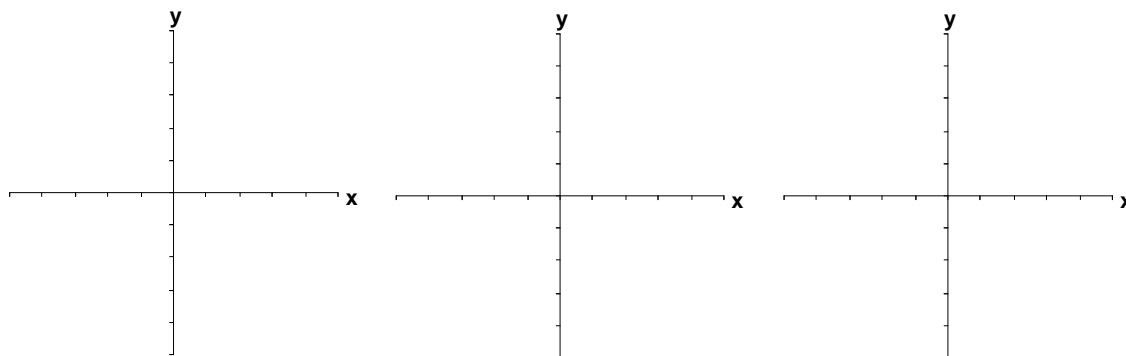
IV. Applications of Functions (Pages 97–99)

A **difference quotient** is defined as . . .

What you should learn
How to use functions to model and solve real-life problems

Describe a real-life situation which can be represented by a function.

Additional notes



Additional notes**Homework Assignment**

Page(s)

Exercises