Chapter 1 Functions and Their Graphs

Course Number

Instructor

Date

Section 1.1 Graphs of Equations

Objective: In this lesson you learned how to sketch graphs of equations by point plotting or using a graphing utility.

Important Vocabulary Define each term or concept.

Solution point

Graph of an equation

Intercepts

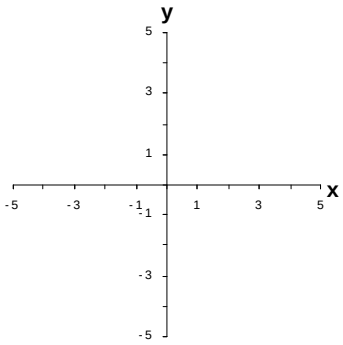
I. The Graph of an Equation (Pages 68–69)

What you should learn
How to sketch graphs of equations by point plotting

To sketch the graph of an equation by point plotting, . . .

Example 1: Complete the table for the equation $y = 3 - 0.5x$. Then use point plotting to sketch the graph of the equation.

x	-4	-2	0	2	4
y					



II. Using a Graphing Utility (Pages 70–73)

What you should learn
How to sketch graphs of equations using a graphing utility

A disadvantage of the point-plotting method is . . .

To graph an equation involving x and y on a graphing utility, . . .

Example 2: Use a graphing utility to graph the equation $12x^2 + 4y = 5$ in a standard viewing window.

A square setting is . . .

A square setting is useful when using a graphing utility to graph . . .

Example 3: Describe how to use a graphing utility to graph $3x^2 + 3y^2 = 75$. Then graph the equation in a square viewing window.

List and describe three common approaches to solving a problem.

1)

2)

3)

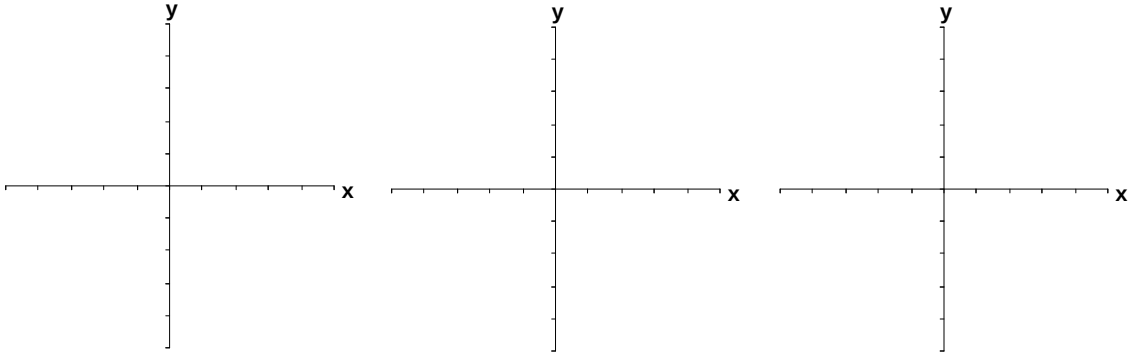
III. Applications of Graphs of Equations (Pages 73–74)

What you should learn
How to use graphs of equations in real-life problems

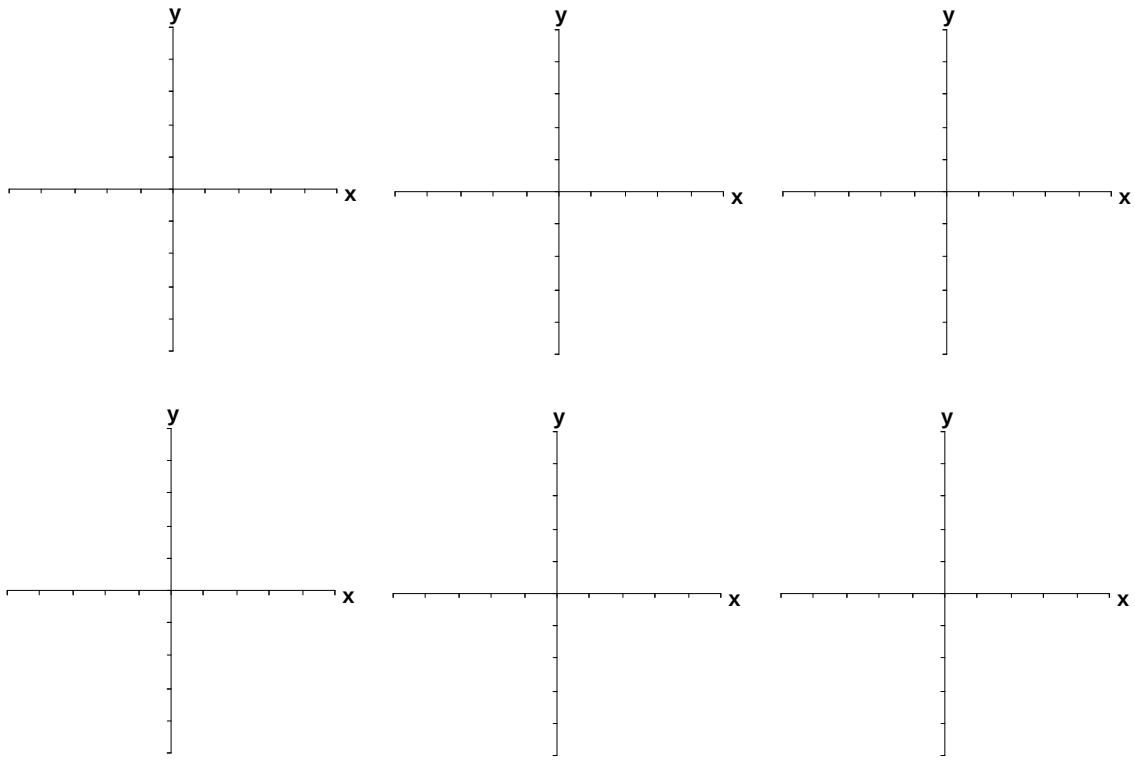
Describe a real-life situation in which a graphical solution approach would be helpful.

Example 3: Suppose a toy company estimates that its top-selling toy sells 240 units per minute, on average, nationally during the holiday shopping season, or according to the equation $S = 240m$, where S is the number of units sold and m is the number of minutes. Explain how a graphing utility could be used to find how long it takes during the holiday shopping season to sell 82,800 units.

Additional notes



Additional notes



Homework Assignment

Page(s)

Exercises