Course Number

Instructor

Date

Section 6.2 Two-Variable Linear Systems

Objective: In this lesson you learned how to solve systems of equations by elimination and how to use systems of equations in two variables to model and solve real-life problems.

Important Vocabulary Define each term or concept.

Method of elimination

Equivalent systems

Consistent system

Inconsistent system

I. The Method of Elimination (Pages 455–457)

What you should learn
How to use the method of elimination to solve systems of linear equations in two variables

The operations that can be performed on a system of linear equations to produce an equivalent system are:

(1)

(2)

(3)

List the steps necessary for solving a system of equations using the method of elimination.

To check the solution of a system of equations using a graphing utility, . . .

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Example 1: Describe a strategy for solving the system of linear equations using the method of elimination.

$$\begin{cases} 3x + y = 9 \\ 4x - 2y = -1 \end{cases}$$

Example 2: Solve the system of linear equations using the method of elimination.

$$\begin{cases} 4x + y = -3 \\ x - 3y = 9 \end{cases}$$

II. Graphical Interpretation of Solutions (Pages 458–460)

What you should learn
How to interpret graphically the numbers of solutions of systems of linear equations in two variables

If a system of linear equations has two different solutions, it must have _____ solutions.

For a system of two linear equations in two variables, list the possible number of solutions the system can have and give a graphical interpretation of the solutions.

If a contradictory statement such as 9 = 0 is obtained while solving a system of linear equations using the method of elimination, then the system has _____.

If a statement that is true for all values of the variable, such as 0 = 0, is obtained while solving a system of linear equations using the method of elimination, then the system has _____.

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Example 3: Is the following system consistent or inconsistent? How many solutions does the system have?

$$\begin{cases} x - 3y = 2 \\ -4x + 12y = 8 \end{cases}$$

III. Applications of Two-Variable Linear Systems

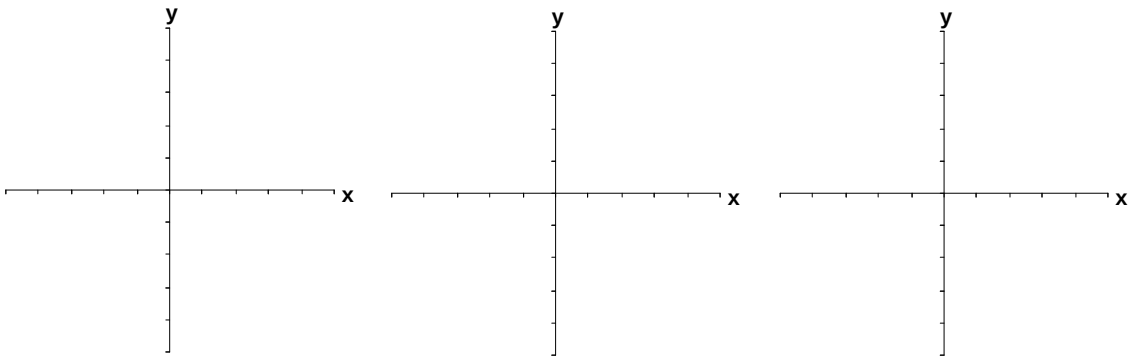
(Pages 461–462)

What you should learn
How to use systems of equations in two variables to model and solve real-life problems

When may a system of linear equations be an appropriate mathematical model for solving a real-life application?

Give an example of a real-life application that could be solved with a system of linear equations.

Additional notes



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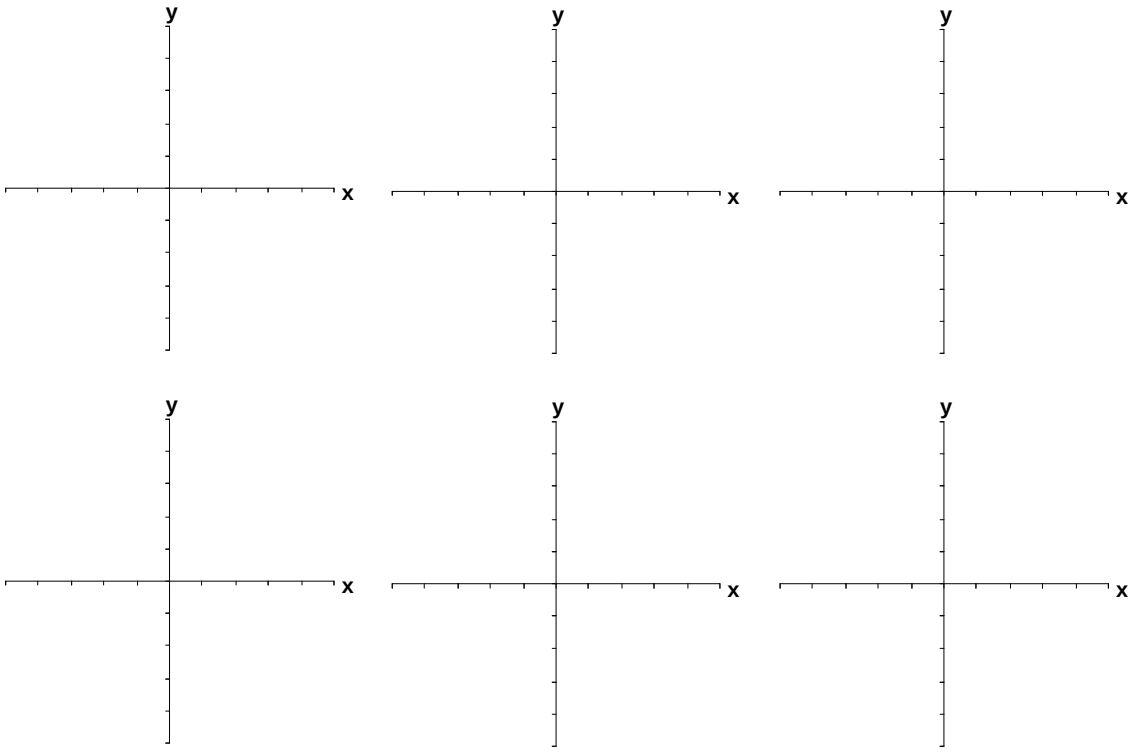
Additional notes



Homework Assignment

Page(s)

Exercises

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