

Section 9.4 Systems of Inequalities

Objective: In this lesson you learned how to sketch the graphs of inequalities in two variables and to solve systems of inequalities and how to use systems of inequalities to model and solve real-life problems.

Course Number

Instructor

Date

Important Vocabulary

Define each term or concept.

Solution of an inequality

Graph of an inequality

Linear inequalities

Solution of a system of inequalities

Consumer surplus

Producer surplus

I. The Graph of an Inequality (Pages 678–679)

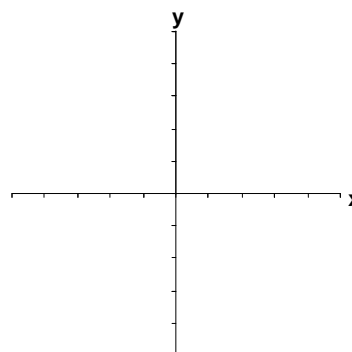
To sketch the graph of an inequality in two variables, . . .

What you should learn

How to sketch the graphs of inequalities in two variables

The solution points for the inequality $y < 3x + 5$ lie _____
the line $y = 3x + 5$.

Example 1: Sketch the graph of the linear inequality $y \geq 2$.



II. Systems of Inequalities (Pages 680–682)

To sketch the graph of a system of inequalities in two variables, . . .

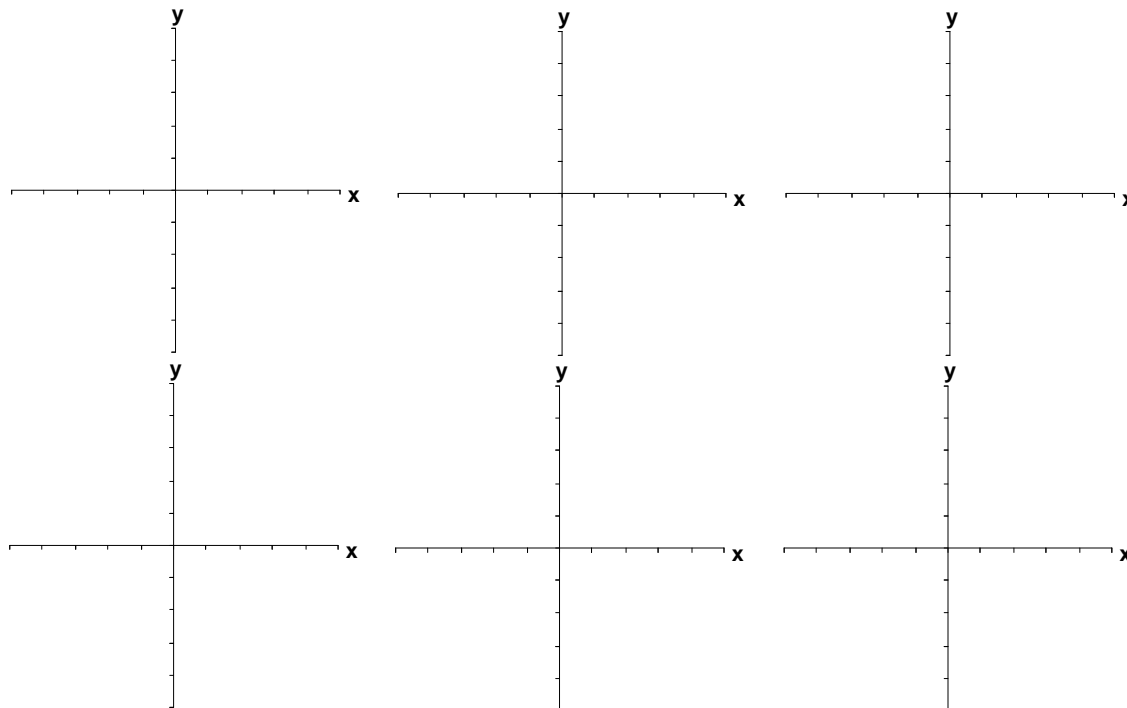
What you should learn
How to solve systems of inequalities

To find the vertices of the solution region for a system of three linear inequalities, . . .

III. Applications of Systems of Inequalities (Pages 683–684)

The consumer surplus is a measure of the amount that consumers would have been willing to pay _____
_____. Producer surplus is a measure of the amount that producers would have been willing to receive _____.

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

**Homework Assignment**

Page(s):

Exercises: