Chapter 7

7.1 **Solving Linear Systems by Graphing**
  Check if an ordered pair is a solution to a system
  Graph and find the point of intersection

7.2 **Solve Linear Systems by Substitution**
  Isolate a variable and input into the other equation

7.3-7.4   **Solve Linear Systems by Adding**
  Line up the variables and constants
  Make one the opposite of the other by multiplying if necessary

7.5 **Solving Special Types of Linear Systems**
  Infinite Solutions vs. No Solution

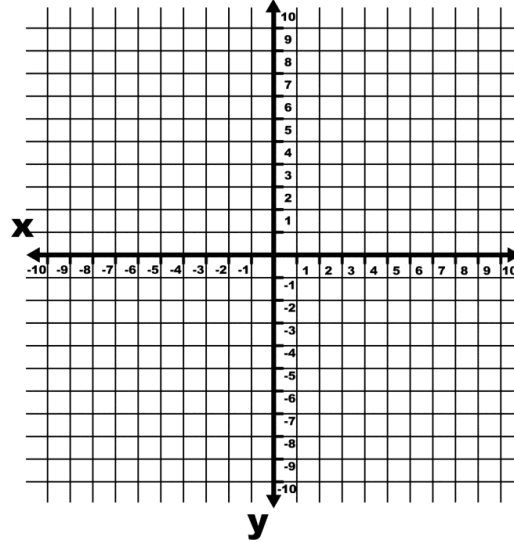**7.6** **Solve Systems of Linear Inequalities**
  Graph the inequalities and find the overlapping shaded region

7.1 Solve by Graphing

1. Graph each line and find the point of intersection.
$$2x + y = 9$$
$$2x + 3y = 15$$

Solve the system using substitution

2. $5x + 2y = 9$
$x + y = -3$

Solve each system using elimination.

3. $\quad\quad\quad 7x + 3y = -12$
$\quad\quad\quad\quad\quad 2x + 5y = 38$

4. $\quad 3x + 2y = 4$
$\quad\quad\quad 2y = 8 - 5x$

5. Janet is planning a party. She is having 12 guests and needs a party favor for each guest. Each guest will either receive a bracelet or a yo-yo. Each bracelet costs $6 and each yo-yo costs $4. She has $54 to spend. How many bracelets and how many yo-yos can she buy for $54?
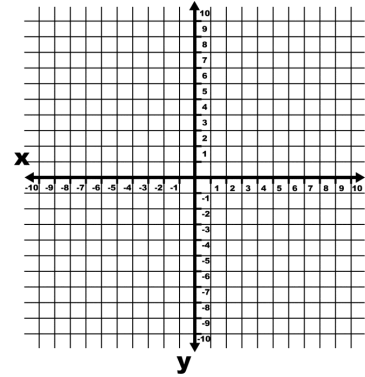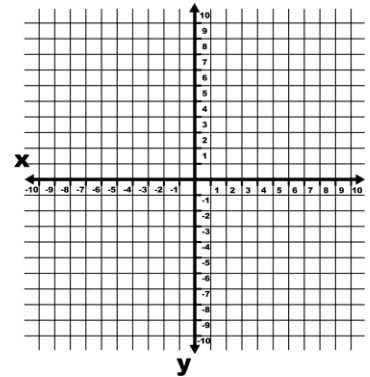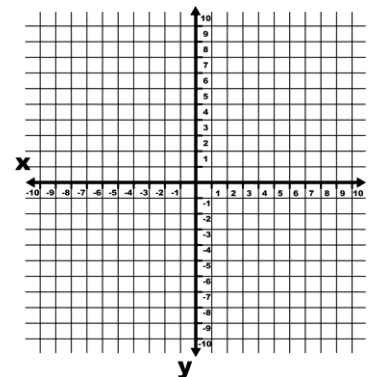
Variables stand for:

System:

Solve:

Answer:

6. What do you know about a system of equations that has no solution?

7. What do you know about a system of equations that has infinite solutions?

8. What do you know about a system of equations that has one solution?

9. Without solving determine if the system has infinite solutions, no solution or one solution.

$y = -6x - 2$

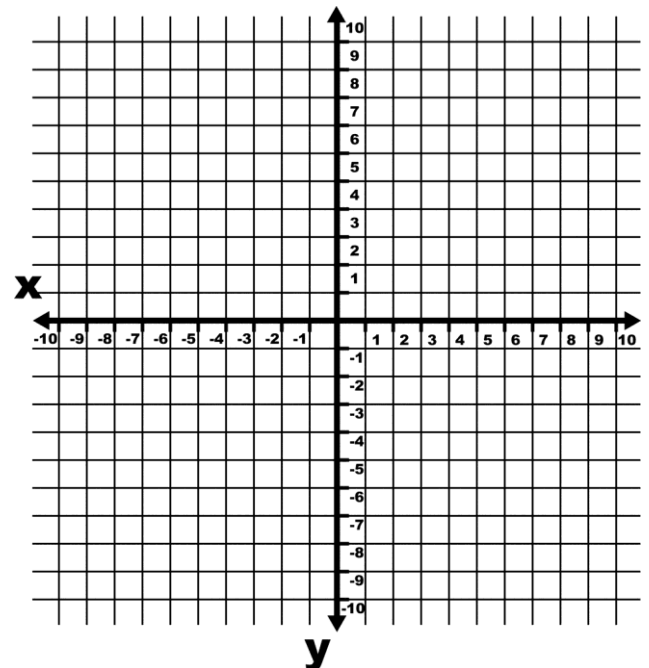$12x + 2y = -6$

$y = 7x + 13$

$-21x + 3y = 39$

$4x + 3y = 27$

$4x - 3y = -27$

10. Graph the system of inequalities.

$y - x \geq -3$

$y < -2x + 1$

11. Graph the system of inequalities.

$y \leq 5$

$y > -3$

$-2y + 4x \geq 10$
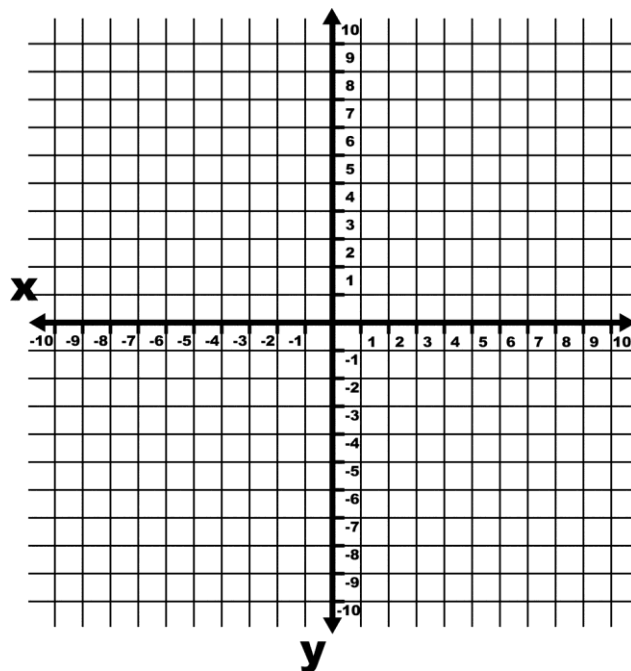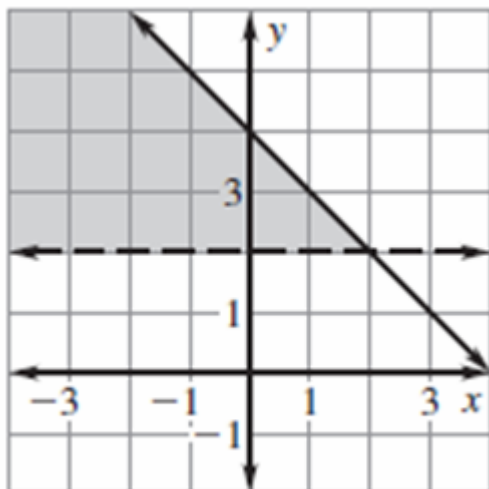

Write a system of inequalities for the shaded region.

12.   13.