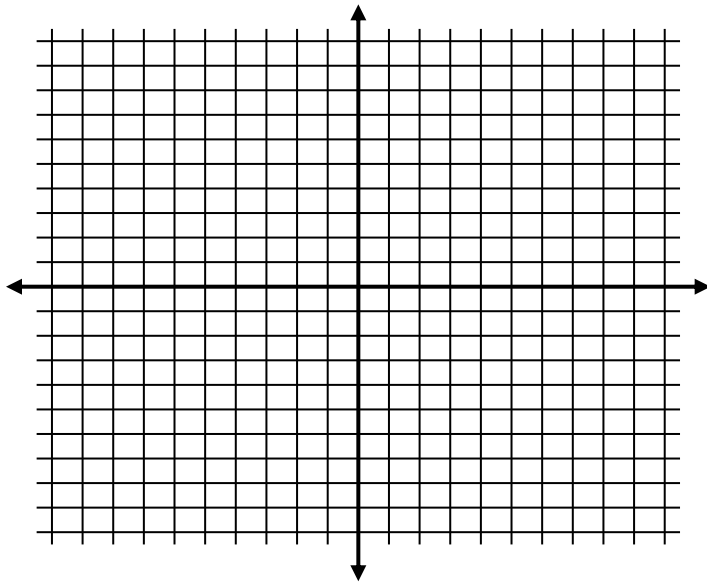


## Chapter 7: Systems of Equations and Inequalities Study Guide

### 7.1: Solve Systems of Equations by Graphing:

- Be able to identify an ordered pair as a solution to a system  
**Ex:** Is (5, 2) a solution to the system:  $2x - 3y = 4$   
 $2x + 8y = 11$
  
- Be able to find a solution to a system of equations by graphing  
**Ex:** Solve the system by graphing:  $2y - 4x = 12$   
 $6x + 3y = -6$



### 7.2: Solve Systems of Equations by Substitution:

- Be able to solve a system of equations by substitution  
**Ex:**  $y = x - 2$   
 $x = 17 - 4y$
  
- Ex:**  $5x + 2y = 9$   
 $x + y = -3$

**Ex:**  $y = x - 4$   
 $y = 18 + 2x$

- Be able to write a linear system and solve

**Ex:** During a football game the parents of the football players sell pretzels and popcorn to raise money for new uniforms. They charge \$2.50 for a bag of popcorn and \$2 for a pretzel. The parents collect \$336 in sales during the game and sell twice as many bags of popcorn as pretzels. How many bags of popcorn do they sell? How many pretzels?

### 7.3-7.4 Solve Systems of Equations by Eliminating a Variable:

- Be able to add or subtract equations to eliminate a variable in order to solve a system

**Ex:**  $4x - 3y = 5$   
 $-2x + 3y = -7$

**Ex:**  $6x - 4y = 14$   
 $3x - 4y = 1$

**Ex:**  $3x + 4y = -6$   
 $2y = 3x + 6$

- Be able to multiplying equations first, then eliminate a variable, in order to solve a system

**Ex:**  $x + y = 2$   
 $2x + 7y = 9$

**Ex:**  $4x - 3y = 8$   
 $5x - 2y = -11$