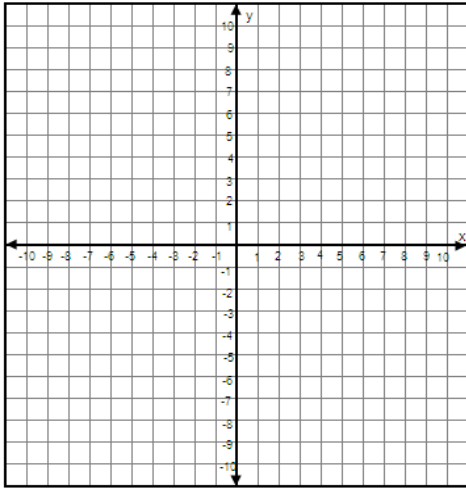


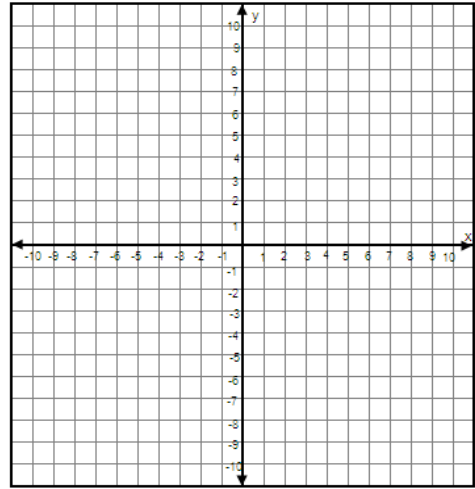
## Unit 7 Study Guide: Systems of Equations

Solve the following systems by GRAPHING method:

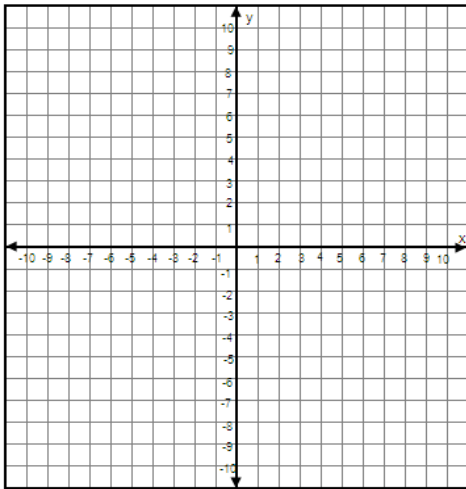
1.  $3x + y = 5$  and  $y - x = 1$



2.  $3x + y = 3$  and  $y = -3x + 3$



3.  $y = 2x - 4$  and  $y = 2x + 1$



Solve the following systems using substitution method.

4.  $y = 6x - 11$  and  $-2x - 3y = -7$

5.  $y = x + 1$  and  $y = 2x - 1$

6.  $-5x + y = -2$  and  $-6x + 3y = 12$

Solve the following systems using elimination method.

7.  $4x + 3y = 5$   
 $2x - 3y = 7$

8.  $2x + y = 9$   
 $-x + 4y = 0$

9.  $6x - 3y = -3$   
 $-12x + 3y = -3$

10.  $3x - 3y = -15$   
 $-4x + 2y = 4$

Solve the following word problems using system of equations:

11. For a community bake sale, you purchases 12 pounds of sugar and 15 pounds of flour. Your total cost was \$9.30. The next day, you purchased 4 pounds of sugar and 10 pounds of flour. Your total cost the second day was \$4.60. Find the cost of a pound of sugar and a pound of flour.

**Define Variables:**

**Write the System:**

**Solve:**

**Answer:**

12. A travel agency offers different getaways to New York. Plan A includes hotel accommodations for 3-nights and 2-pair of baseball tickets for \$645. Plan B includes hotel accommodations for 5-nights and 4-pairs of baseball tickets for \$1135. How much does a single hotel cost and how much does a single pair of baseball tickets cost?

**Define Variables:**

**Write the System:**

**Solve:**

**Answer:**

18. Is (3, 2) the solution to this system of equations?

$$2x - 3y = 0$$

$$2x + y = 8$$

19. You are walking along the path  $y = 6x + 8$ . Your friend Rick is walking along  $y - 12 = 8x$ . At what point do your paths cross?