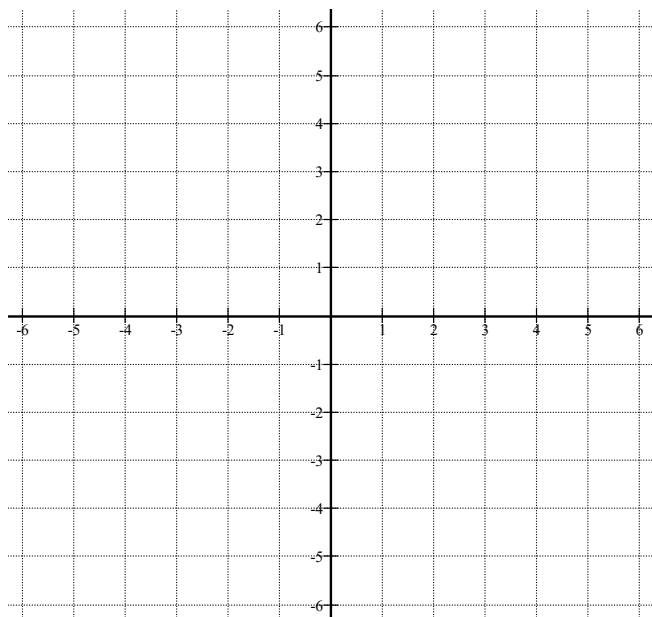


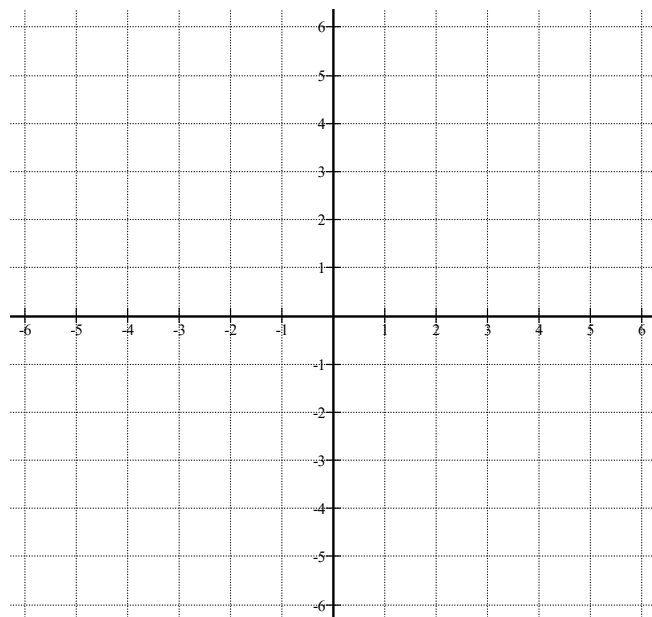
1. Solve each system of linear equations graphically.

a) $y = -2x + 5$
 $y = x + 2$

b) $3x + 2y = -12$
 $x - 2y + 4 = 0$



Solution: _____



Solution: _____

2. Verify each solution from question #1.

3. How many solutions does each linear system have? Justify (showing all work) your answers without graphing or solving.

a) $2x + 3y = 20$
 $6x - y = 20$

b) $x - 5y = 1$
 $-x + 5y = 1$

c) $x + 3y = 5$
 $2x + 6y = 10$

4. Solve each system of linear equations by substitution:

a) $4x + y = 1$
 $x = 2y - 20$

b) $-3x + y = -3$
 $5x - 2y = 10$

5. Solve the system of linear equations by substitution:

$$\frac{x}{6} + \frac{y}{3} = 6$$
$$3x - 2y = 12$$

6. Maria has a total of 20 nickels and quarters. She has four times as many nickels as quarters. How much money does Maria have? Write a system of linear equations and solve by substitution.

7. Solve each system of linear equations by elimination:

b) $x + y = 4$
 $x - y = 10$

b) $y + 6 = x$
 $y = -3x + 2$

8. Solve each system of linear equations by elimination:

a) $2x + y = 15$
 $5x - 6y = -22$

b) $3x + 2y = 0$
 $8x + 7y = 5$

9. Two numbers differ by five. Four times the smaller number is five less than triple the larger. Find the numbers by writing a system of linear equations and solving by elimination.