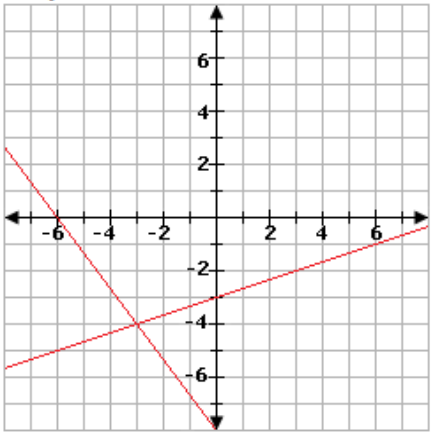
Name:_____ **Systems of Equations**

1. Use the system of equations and graphs below to complete the sentences.

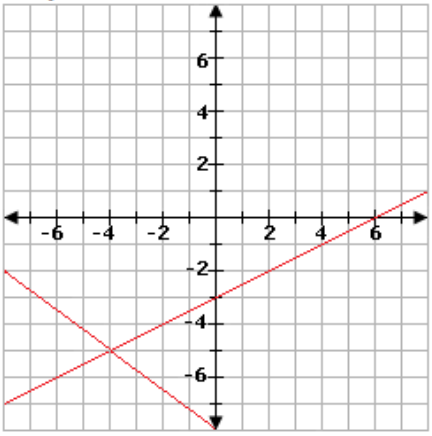
$$-x + 2y = -6$$

$$3x + 4y = -32$$

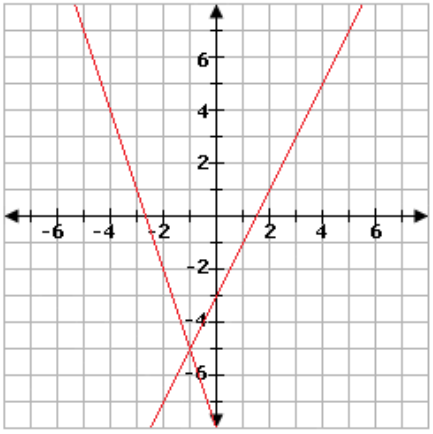
Graph A



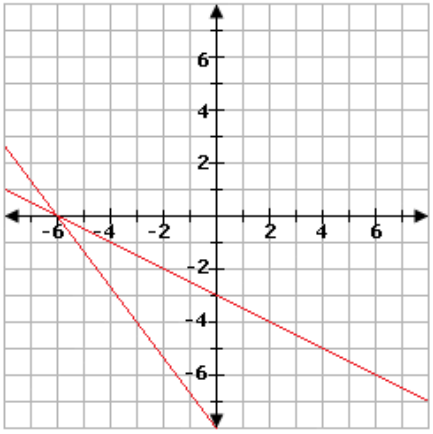
Graph B



Graph C

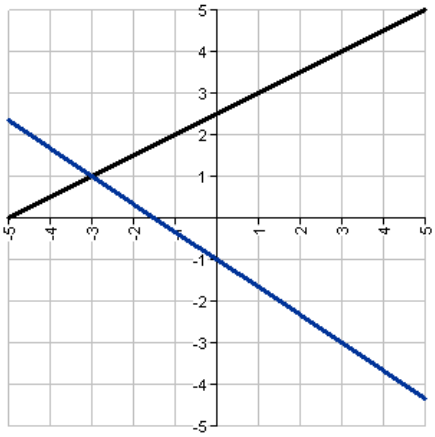


Graph D



The correct solution graph is Graph ____ . The solution for this system is (____ , ____).

2. The system of equations above is graphed below.



$$-2x + 4y = 10$$

$$6x + 9y = -9$$

Find the solution to the system.

- **A.** $x = -3, y = 1$
- **B.** $x = 3, y = -3$
- **C.** $x = 0, y = -1$
- **D.** $x = 3, y = 4$

3. Solve for *x* in the two equations below using substitution.

$$8x - 2y = 16$$
$$16x + 2y = 80$$

- **A.** $x = 2$
- **B.** $x = 8$
- **C.** $x = 12$
- **D.** $x = 4$

4. Solve for *y* in the two equations below using substitution.

$$3x - 9y = 12$$
$$3x + 9y = 84$$

- **A.** $y = 8$
- **B.** $y = 16$
- **C.** $y = \frac{16}{3}$
- **D.** $y = 4$

5. Solve for *x* in the two equations below using substitution.

$$6x + 2y = 4$$
$$2x + 3y = 6$$

- **A.** $x = 0$
- **B.** $x = \frac{12}{7}$
- **C.** $x = \frac{3}{7}$
- **D.** $x = \frac{15}{11}$

6. Use elimination to find the solution to the system of equations.

$$5x + y = 9$$
$$2x - 2y = 18$$

- **A.** $x = 6, y = -21$
- **B.** $x = 3, y = -6$
- **C.** $x = 15, y = 6$
- **D.** $x = 7, y = 2$

7. Use elimination to find the solution to the system of equations.

$$-x + 2y = 6$$
$$5x + 6y = 18$$

- **A.** $x = 2, y = 4$
- **B.** $x = -2, y = \frac{14}{3}$
- **C.** $x = 0, y = 3$
- **D.** $x = 8, y = 7$

8. Use elimination to find the solution to the system of equations.

$$5x + 2y = 24$$
$$2x + 5y = 18$$

- **A.** $x = -3, y = \frac{24}{5}$
- **B.** $x = -\frac{7}{2}, y = 5$
- **C.** $x = 4, y = 2$
- **D.** $x = 1, y = \frac{19}{2}$