

Student: _____
Date: _____

Instructor: Deb Wertz
Course: MAP102 MASTER

Assignment: Homework #22

1. Use the substitution method to solve the following system of equations.

$$\begin{cases} x + y = 12 \\ y = 5x \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. There is one solution. The solution of the system is _____.
(Simplify your answer. Type an ordered pair.)
- B. The solution set of the system is $\{(x,y) \mid x + y = 12\}$.
- C. The solution set is \emptyset .

2. Use the substitution method to solve the following system of equations.

$$\begin{cases} 5x - y = 46 \\ 2x + 3y = -2 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. There is one solution. The solution of the system is _____.
(Simplify your answer. Type an ordered pair.)
- B. The solution set of the system is $\{(x,y) \mid 5x - y = 46\}$.
- C. The solution set is \emptyset .

3. Solve the system of equations by the elimination method.

$$\begin{cases} -x + 2y = 0 \\ x + 2y = 1 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. There is one solution. The solution of the system is _____.
(Simplify your answer. Type an ordered pair. Use integers or fractions for any numbers in the expression.)
- B. The solution set of the system is $\{(x,y) \mid -x + 2y = 0\}$.
- C. The solution set is \emptyset .

4. Use the elimination method to solve the following system of equations.

$$\begin{cases} 4x + y = 10 \\ x - 3y = 9 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. There is one solution. The solution of the system is _____.
(Simplify your answer. Type an ordered pair.)
- B. The solution set of the system is $\{(x,y) \mid 4x + y = 10\}$.
- C. The solution set is $\{ \}$ or \emptyset .

5. Solve the system of equations by the elimination method.

$$\begin{cases} 8x - 6y = 6 \\ 7x - 5y = 6 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. There is one solution. The solution of the system is _____.
(Simplify your answer. Type an ordered pair. Use integers or fractions for any numbers in the expression.)
- B. The solution set of the system is $\{(x,y) | 8x - 6y = 6\}$.
- C. The solution set is \emptyset .

6. Solve the system of equations.

$$\begin{cases} x = 2y + 3 \\ 2x - 4y = 6 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. There is one solution. The solution of the system is _____.
(Simplify your answer. Type an ordered pair.)
- B. The solution set of the system is $\{(x,y) | x = 2y + 3\}$.
- C. The solution set is \emptyset .

7. Solve the system of equations.

$$\begin{cases} 7x - y = -5 \\ y = -7x \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. There is one solution. The solution of the system is _____.
(Simplify your answer. Type an ordered pair.)
- B. The solution set of the system is $\{(x,y) | 7x - y = -5\}$.
- C. The solution set is \emptyset .

8. Without graphing, determine whether system has one solution, no solution, or an infinite number of solutions.

$$\begin{cases} y = 6x - 5 \\ y = 6x + 7 \end{cases}$$

Choose the correct answer below.

- A. There is one solution.
- B. There are an infinite number of solutions.
- C. There is no solution.

9. Without graphing, determine whether system has one solution, no solution, or an infinite number of solutions.

$$\begin{cases} x + y = 7 \\ 6x + 6y = 42 \end{cases}$$

Choose the correct answer below.

- A. There is one solution.
- B. There are an infinite number of solutions.
- C. There is no solution.

1. A. There is one solution. The solution of the system is (2,10). (Simplify your answer. Type an ordered pair.)

2. A. There is one solution. The solution of the system is (8, - 6). (Simplify your answer. Type an ordered pair.)

3. A. There is one solution. The solution of the system is $\left(\frac{1}{2}, \frac{1}{4}\right)$.

(Simplify your answer. Type an ordered pair. Use integers or fractions for any numbers in the expression.)

4. A. There is one solution. The solution of the system is (3, - 2). (Simplify your answer. Type an ordered pair.)

5. A. There is one solution. The solution of the system is (3,3).

(Simplify your answer. Type an ordered pair. Use integers or fractions for any numbers in the expression.)

6. B. The solution set of the system is $\{(x,y) | x = 2y + 3\}$.

7. A. There is one solution. The solution of the system is $\left(-\frac{5}{14}, \frac{5}{2}\right)$. (Simplify your answer. Type an ordered pair.)

8. C. There is no solution.

9. B. There are an infinite number of solutions.
