

**Lesson #2 A-2: Understanding and Solving Systems of Equations using the Elimination Method and Classifying Systems of Equations** (Reference: Lesson #24 in book)**Problem**

1. For each of the following systems of equations, please solve the system by Elimination Method and express the solution as a coordinate point.(SHOW ALL OF YOUR WORK.)

$$\begin{aligned} 1. \quad & 5x + 2y = 9 \\ & -5x + 6y = 7 \end{aligned}$$

$$\begin{aligned} 2. \quad & x + 4y = 16 \\ & 3x + 5y = 20 \end{aligned}$$

$$\begin{aligned} 3. \quad & 4x + 3y = 10 \\ & -8x - 6y = -48 \end{aligned}$$

$$\begin{aligned} 4. \quad & 12x - 4y = 16 \\ & -9x + 3y = -12 \end{aligned}$$

$$\begin{aligned} 5. \quad & 4x - 3y = 15 \\ & 6x + 5y = -25 \end{aligned}$$

$$\begin{aligned} 6. \quad & 2x + 2y = -8 \\ & -5x - 3y = 14 \end{aligned}$$

7. For each of the following please classify whether the systems of equations are Consistent and Independent, Consistent and Dependent, or Inconsistent and whether each system has One Solution, No Solutions, or an Infinite number of Solutions. State your answer; if your answer is Consistent and Independent and has One solution, please solve and give me the one solution.

$$\begin{aligned} 7. \quad & -3x + y = -4 \\ & -9x + 3y = -12 \end{aligned}$$

$$\begin{aligned} 8. \quad & 2x + 3y = 18 \\ & -4x - 6y = 24 \end{aligned}$$

$$\begin{aligned} 9. \quad & 3x - 6y = 18 \\ & -2x + 4y = -12 \end{aligned}$$

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 10.  $-3x + 3y = 9$   
 $8x - 4y = -4$

Problem

1. For each of the following systems of equations, please solve the system by Elimination Method and express the solution as a coordinate point. (SHOW ALL OF YOUR WORK.)

1.  $2x + 3y = 9$   
 $-2x + 6y = 7$

2.  $x + 4y = 18$   
 $3x + 2y = 20$

3.  $4x + 3y = 10$   
 $-8x - 6y = -48$

4.  $12x - 4y = 16$   
 $-6x + 3y = -12$

5.  $4x - 3y = 12$   
 $6x + 5y = -25$

6.  $2x + 3y = -8$   
 $-2x - 3y = 14$

7. For each of the following please classify whether the systems of equations are Consistent and Independent, Consistent and Dependent, or Inconsistent and whether each system has One Solution, No Solution, or an Infinite number of Solutions. State your answer; if your answer is Consistent and Independent and has One Solution, please solve and give me the one solution.

7.  $-2x + 3y = -12$   
 $-2x + 3y = -12$

8.  $2x + 3y = 18$   
 $-4x - 6y = 24$

9.  $3x - 6y = 18$   
 $-2x + 4y = -12$