

Intermediate Algebra Skill

Solving 2 x 2 Linear System by Gaussian Elimination

Solve the following Linear Systems of Equations by Gaussian Elimination:

$$1) \begin{cases} x + y = 3 \\ x - y = -1 \end{cases}$$

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

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

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

$$5) \begin{cases} 4x + 3y = 11 \\ y - 2x = 2 \end{cases}$$

$$6) \begin{cases} 6y - 3x = 14 \\ x - 3y = 5 \end{cases}$$

$$7) \begin{cases} x - y = -6 \\ x - 5y = 2 \end{cases}$$

$$8) \begin{cases} x + y = 4 \\ y - 2x = 13 \end{cases}$$

$$9) \begin{cases} x - 3y = -2 \\ 2x + 15y = 10 \end{cases}$$

$$10) \begin{cases} y = 4x + 3 \\ 8x - 7y = -6 \end{cases}$$

$$11) \begin{cases} x + y = 0 \\ 3x - y = 2 \end{cases}$$

$$12) \begin{cases} x - 2y = 1 \\ x - y = 0 \end{cases}$$

$$13) \begin{cases} 5x - y = 2 \\ x - y = 1 \end{cases}$$

$$14) \begin{cases} x + y = -1 \\ 5x - 10y = 4 \end{cases}$$

Answers to Solving 2 x 2 Linear System by Gaussian Elimination

1) $(1, 2)$

2) $(2, 4)$

3) $(-1, 5)$

4) $(10, -7)$

5) $\left(\frac{1}{2}, 3\right)$

6) $\left(-4, \frac{1}{3}\right)$

7) $(-8, -2)$

8) $(-3, 7)$

9) $\left(0, \frac{2}{3}\right)$

10) $\left(-\frac{3}{4}, 0\right)$

11) $\left(\frac{1}{2}, -\frac{1}{2}\right)$

12) $\left(\frac{1}{3}, \frac{1}{3}\right)$

13) $\left(\frac{1}{4}, -\frac{3}{4}\right)$

14) $\left(-\frac{2}{5}, -\frac{3}{5}\right)$