

Solving Systems of Equations by Elimination

Solve each system by elimination.

1)
$$\begin{aligned} -4x - 2y &= -12 \\ 4x + 8y &= -24 \end{aligned}$$

2)
$$\begin{aligned} 4x + 8y &= 20 \\ -4x + 2y &= -30 \end{aligned}$$

3)
$$\begin{aligned} x - y &= 11 \\ 2x + y &= 19 \end{aligned}$$

4)
$$\begin{aligned} -6x + 5y &= 1 \\ 6x + 4y &= -10 \end{aligned}$$

5)
$$\begin{aligned} -2x - 9y &= -25 \\ -4x - 9y &= -23 \end{aligned}$$

6)
$$\begin{aligned} 8x + y &= -16 \\ -3x + y &= -5 \end{aligned}$$

7)
$$\begin{aligned} -6x + 6y &= 6 \\ -6x + 3y &= -12 \end{aligned}$$

8)
$$\begin{aligned} 7x + 2y &= 24 \\ 8x + 2y &= 30 \end{aligned}$$

9)
$$\begin{aligned} 5x + y &= 9 \\ 10x - 7y &= -18 \end{aligned}$$

10)
$$\begin{aligned} -4x + 9y &= 9 \\ x - 3y &= -6 \end{aligned}$$

11)
$$\begin{aligned} -3x + 7y &= -16 \\ -9x + 5y &= 16 \end{aligned}$$

12)
$$\begin{aligned} -7x + y &= -19 \\ -2x + 3y &= -19 \end{aligned}$$

$$\begin{aligned} 13) \quad & 16x - 10y = 10 \\ & -8x - 6y = 6 \end{aligned}$$

$$\begin{aligned} 14) \quad & 8x + 14y = 4 \\ & -6x - 7y = -10 \end{aligned}$$

$$\begin{aligned} 15) \quad & -4x - 15y = -17 \\ & -x + 5y = -13 \end{aligned}$$

$$\begin{aligned} 16) \quad & -x - 7y = 14 \\ & -4x - 14y = 28 \end{aligned}$$

$$\begin{aligned} 17) \quad & -7x - 8y = 9 \\ & -4x + 9y = -22 \end{aligned}$$

$$\begin{aligned} 18) \quad & 5x + 4y = -30 \\ & 3x - 9y = -18 \end{aligned}$$

$$\begin{aligned} 19) \quad & -4x - 2y = 14 \\ & -10x + 7y = -25 \end{aligned}$$

$$\begin{aligned} 20) \quad & 3x - 2y = 2 \\ & 5x - 5y = 10 \end{aligned}$$

$$\begin{aligned} 21) \quad & 5x + 4y = -14 \\ & 3x + 6y = 6 \end{aligned}$$

$$\begin{aligned} 22) \quad & 2x + 8y = 6 \\ & -5x - 20y = -15 \end{aligned}$$

$$\begin{aligned} 23) \quad & -14 = -20y - 7x \\ & 10y + 4 = 2x \end{aligned}$$

$$\begin{aligned} 24) \quad & 3 + 2x - y = 0 \\ & -3 - 7y = 10x \end{aligned}$$

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Solve each system by elimination.

1)
$$\begin{aligned} -4x - 2y &= -12 \\ 4x + 8y &= -24 \end{aligned}$$

 $(6, -6)$

2)
$$\begin{aligned} 4x + 8y &= 20 \\ -4x + 2y &= -30 \end{aligned}$$

 $(7, -1)$

3)
$$\begin{aligned} x - y &= 11 \\ 2x + y &= 19 \end{aligned}$$

 $(10, -1)$

4)
$$\begin{aligned} -6x + 5y &= 1 \\ 6x + 4y &= -10 \end{aligned}$$

 $(-1, -1)$

5)
$$\begin{aligned} -2x - 9y &= -25 \\ -4x - 9y &= -23 \end{aligned}$$

 $(-1, 3)$

6)
$$\begin{aligned} 8x + y &= -16 \\ -3x + y &= -5 \end{aligned}$$

 $(-1, -8)$

7)
$$\begin{aligned} -6x + 6y &= 6 \\ -6x + 3y &= -12 \end{aligned}$$

 $(5, 6)$

8)
$$\begin{aligned} 7x + 2y &= 24 \\ 8x + 2y &= 30 \end{aligned}$$

 $(6, -9)$

9)
$$\begin{aligned} 5x + y &= 9 \\ 10x - 7y &= -18 \end{aligned}$$

 $(1, 4)$

10)
$$\begin{aligned} -4x + 9y &= 9 \\ x - 3y &= -6 \end{aligned}$$

 $(9, 5)$

11)
$$\begin{aligned} -3x + 7y &= -16 \\ -9x + 5y &= 16 \end{aligned}$$

 $(-4, -4)$

12)
$$\begin{aligned} -7x + y &= -19 \\ -2x + 3y &= -19 \end{aligned}$$

 $(2, -5)$

$$13) \begin{aligned} 16x - 10y &= 10 \\ -8x - 6y &= 6 \end{aligned}$$

$(0, -1)$

$$14) \begin{aligned} 8x + 14y &= 4 \\ -6x - 7y &= -10 \end{aligned}$$

$(4, -2)$

$$15) \begin{aligned} -4x - 15y &= -17 \\ -x + 5y &= -13 \end{aligned}$$

$(8, -1)$

$$16) \begin{aligned} -x - 7y &= 14 \\ -4x - 14y &= 28 \end{aligned}$$

$(0, -2)$

$$17) \begin{aligned} -7x - 8y &= 9 \\ -4x + 9y &= -22 \end{aligned}$$

$(1, -2)$

$$18) \begin{aligned} 5x + 4y &= -30 \\ 3x - 9y &= -18 \end{aligned}$$

$(-6, 0)$

$$19) \begin{aligned} -4x - 2y &= 14 \\ -10x + 7y &= -25 \end{aligned}$$

$(-1, -5)$

$$20) \begin{aligned} 3x - 2y &= 2 \\ 5x - 5y &= 10 \end{aligned}$$

$(-2, -4)$

$$21) \begin{aligned} 5x + 4y &= -14 \\ 3x + 6y &= 6 \end{aligned}$$

$(-6, 4)$

$$22) \begin{aligned} 2x + 8y &= 6 \\ -5x - 20y &= -15 \end{aligned}$$

Infinite number of solutions

$$23) \begin{aligned} -14 &= -20y - 7x \\ 10y + 4 &= 2x \end{aligned}$$

$(2, 0)$

$$24) \begin{aligned} 3 + 2x - y &= 0 \\ -3 - 7y &= 10x \end{aligned}$$

$(-1, 1)$