

Copy problems onto your own paper and show work.

**Solve by substitution. Give answers in  $(x, y)$  form.**

1. 
$$\begin{aligned} -3x + 4y &= 1 \\ x &= 2y + 1 \end{aligned}$$

2. 
$$\begin{aligned} 6x + 2y &= 11 \\ 4x + y &= 6 \end{aligned}$$

**Solve by linear combination (addition elimination). Give answers in  $(x, y)$  form.**

3. 
$$\begin{aligned} -5x + y &= 17 \\ 3x + 2y &= 8 \end{aligned}$$

4. 
$$\begin{aligned} 2x - 7y &= -10 \\ 3x + 2y &= 10 \end{aligned}$$

5. 
$$\begin{aligned} 3x + 4y &= -6 \\ 7x + 5y &= -1 \end{aligned}$$

**Solve each equation for  $x$ .**

6.  $x^2 - 9x + 20 = 0$

7.  $x^2 - 18x - 40 = 0$

8.  $3x^2 - 7x + 2 = 0$

9.  $2x^2 + 7x - 4 = 0$

10.  $2x^2 = 144$

11.  $3x^2 - 19 = 77$

Copy problems onto your own paper and show work.

**Solve by substitution. Give answers in  $(x, y)$  form.**

1. 
$$\begin{aligned} -3x + 4y &= 1 \\ x &= 2y + 1 \end{aligned}$$

2. 
$$\begin{aligned} 6x + 2y &= 11 \\ 4x + y &= 6 \end{aligned}$$

**Solve by linear combination (addition elimination). Give answers in  $(x, y)$  form.**

3. 
$$\begin{aligned} -5x + y &= 17 \\ 3x + 2y &= 8 \end{aligned}$$

4. 
$$\begin{aligned} 2x - 7y &= -10 \\ 3x + 2y &= 10 \end{aligned}$$

5. 
$$\begin{aligned} 3x + 4y &= -6 \\ 7x + 5y &= -1 \end{aligned}$$

**Solve each equation for  $x$ .**

6.  $x^2 - 9x + 20 = 0$

7.  $x^2 - 18x - 40 = 0$

8.  $3x^2 - 7x + 2 = 0$

9.  $2x^2 + 7x - 4 = 0$

10.  $2x^2 = 144$

11.  $3x^2 - 19 = 77$