

Solve each system of equations.

1) $x^2 + x + 3y - 8 = 0$
 $x + y = 3$

2) $6x^2 + 2y^2 - 15x + 3y - 27 = 0$
 $-x + y - 3 = 0$

3) $x^2 + y^2 + 35x - 3y + 6 = 0$
 $-3x + y + 1 = 0$

4) $x^2 + y^2 + 10x + 2y + 6 = 0$
 $3x - y = -4$

5) $x^2 + y^2 - 20x + 28 = 0$
 $x - y + 2 = 0$

6) $-2x^2 - 18x + y - 34 = 0$
 $2x - y = -2$

$$7) \begin{aligned} 2x^2 + 2y^2 - 7x + 2y + 6 &= 0 \\ x + 2y - 2 &= 0 \end{aligned}$$

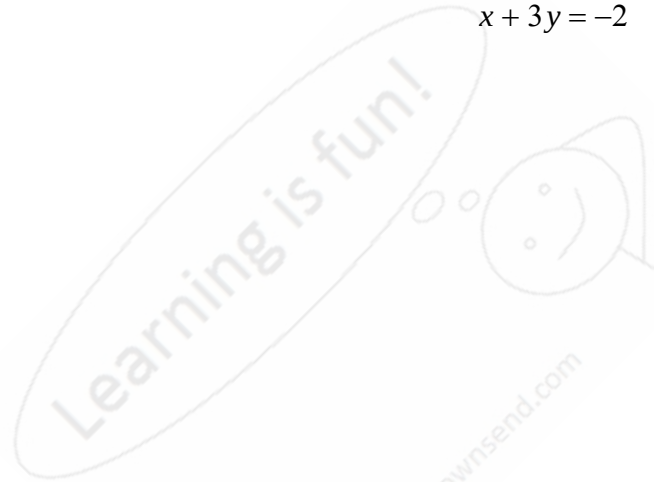
$$8) \begin{aligned} -x^2 + 2y^2 - x - 2y - 6 &= 0 \\ x + 2y &= 3 \end{aligned}$$

$$9) \begin{aligned} -3x^2 + 2y^2 - 23x + y - 70 &= 0 \\ 2x - y &= -2 \end{aligned}$$

$$10) \begin{aligned} 3x^2 - 41x + 3y + 149 &= 0 \\ x + 3y &= -2 \end{aligned}$$

$$11) \begin{aligned} -5x^2 + 6y^2 + 29x - y - 45 &= 0 \\ x - y &= 3 \end{aligned}$$

$$12) \begin{aligned} 2x^2 - 5y^2 - 43x + y - 30 &= 0 \\ x + y &= 2 \end{aligned}$$



Answers to

1) $(1, 2)$

5) $(4, 6)$

9) $(4, 10), (-3, -4)$

2) $(0, 3)$

6) $(-4, -6)$

10) $(7, -3)$

3) $(-1, -4)$

7) $(2, 0)$

11) $(2, -1), (6, 3)$

4) $(-3, -5), (-1, 1)$

8) $(-3, 3)$

12) $(-4, 6)$

