

Solve each system of equations.

1) $-3x^2 + y^2 + 25x + 3y - 98 = 0$
 $x - y = 0$

2) $4x^2 - 2y^2 - 54x - 3y + 28 = 0$
 $2x + y = 4$

3) $3x^2 - y^2 - 4x - 2y - 5 = 0$
 $x - y - 3 = 0$

4) $4x^2 + 3y^2 + 3x - 127y + 190 = 0$
 $x + 2y = 0$

5) $4x^2 + y^2 - 56x - y + 76 = 0$
 $3x - y = 1$

6) $x^2 - 6y^2 - 45x + 3y + 84 = 0$
 $x + y = 4$

$$\begin{aligned} 7) \quad & -2x^2 - 6x + y - 4 = 0 \\ & 2x - y = -2 \end{aligned}$$

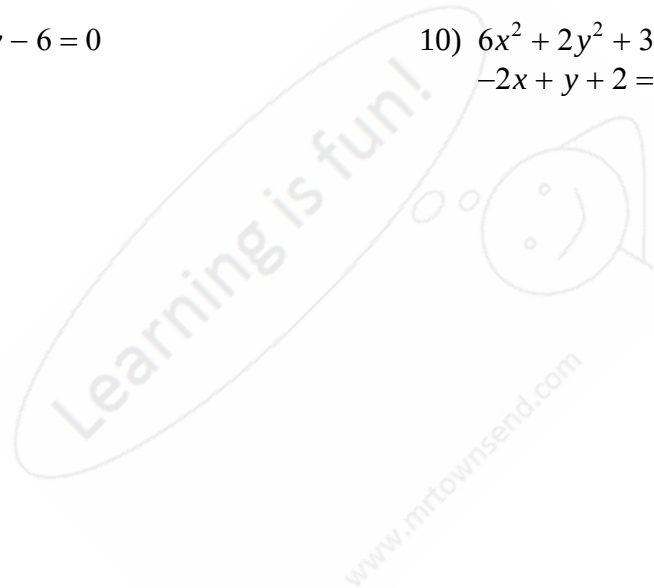
$$\begin{aligned} 8) \quad & -4x^2 - 42x - 3y - 138 = 0 \\ & -2x + y - 2 = 0 \end{aligned}$$

$$\begin{aligned} 9) \quad & 2x^2 + y^2 - 15x - y - 6 = 0 \\ & 3x + y + 2 = 0 \end{aligned}$$

$$\begin{aligned} 10) \quad & 6x^2 + 2y^2 + 32x - y - 94 = 0 \\ & -2x + y + 2 = 0 \end{aligned}$$

$$\begin{aligned} 11) \quad & 4x^2 - 55x - y + 196 = 0 \\ & x - y = 0 \end{aligned}$$

$$\begin{aligned} 12) \quad & x^2 + y^2 - 25x + y + 34 = 0 \\ & -3x + y + 3 = 0 \end{aligned}$$



Answers to

- 1) $(7, 7)$
- 5) $(3, 8), (2, 5)$
- 9) $(0, -2)$

- 2) $(-2, 8)$
- 6) $(0, 4)$
- 10) $(2, 2), (-3, -8)$

- 3) $(-2, -5), (2, -1)$
- 7) $(-1, 0)$
- 11) $(7, 7)$

- 4) $(-10, 5), (-4, 2)$
- 8) $(-6, -10)$
- 12) $(2, 3)$

