

Solving Quadratic Equations by Completing the Square

1 $x^2 - 4x - 98 = 0$

2 $y^2 - 2y - 15 = 0$

3 $3x^2 - x - 3 = 0$

4 $x^2 - 12x + 15 = 0$

5 $x^2 - 3x - 2 = 0$

6 $n^2 - 6n - 55 = 0$

7 $p^2 - 10p + 26 = 8$

8 $-2y^2 + 3y = -7$

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Answers

1 $x^2 - 4x - 98 = 0$

$$(2 + \sqrt{102}, 2 - \sqrt{102})$$

2 $y^2 - 2y - 15 = 0$

$$(5, -3)$$

3 $3x^2 - x - 3 = 0$

$$\left(\frac{1 + \sqrt{37}}{6}, \frac{1 - \sqrt{37}}{6}\right)$$

4 $x^2 - 12x + 15 = 0$

$$(6 + \sqrt{21}, 6 - \sqrt{21})$$

5 $x^2 - 3x - 2 = 0$

$$\left(\frac{3 + \sqrt{17}}{2}, \frac{3 - \sqrt{17}}{2}\right)$$

6 $n^2 - 6n - 55 = 0$

$$(11, -5)$$

7 $p^2 - 10p + 26 = 8$

$$(5 + \sqrt{7}, 5 - \sqrt{7})$$

8 $-2y^2 + 3y = -7$

$$\left(\frac{3 + \sqrt{65}}{4}, \frac{3 - \sqrt{65}}{4}\right)$$
