

Assignment

Solve each equation by completing the square. Leave answers as simplified radicals.

1) $x^2 + 6x - 68 = 4$

$\{6, -12\}$

2) $x^2 + 18x + 63 = -2$

$\{-5, -13\}$

3) $r^2 - 18r + 41 = -4$

$\{15, 3\}$

4) $k^2 - 8k - 1 = 8$

$\{9, -1\}$

5) $m^2 + 8m - 88 = -4$

$\{6, -14\}$

6) $v^2 - 16v + 40 = -8$

$\{12, 4\}$

7) $6n^2 - 12n - 43 = 5$

$\{4, -2\}$

8) $9b^2 - 18b - 17 = 10$

$\{3, -1\}$

9) $4p^2 + 16p - 45 = 3$

$\{2, -6\}$

10) $7x^2 + 14x - 17 = 4$

$\{1, -3\}$

11) $4v^2 + 8v - 56 = 8$

$\{-1 + \sqrt{17}, -1 - \sqrt{17}\}$

12) $2r^2 - 16r + 14 = -2$

$\{4 + 2\sqrt{2}, 4 - 2\sqrt{2}\}$

13) $11a^2 - 6a - 77 = -10a + 10a^2$

$\{7, -11\}$

14) $x^2 - 14x - 70 = 7$

$\{7 + 3\sqrt{14}, 7 - 3\sqrt{14}\}$

15) $2x^2 + 8x - 23 = 4 + x^2$

$\{-4 + \sqrt{43}, -4 - \sqrt{43}\}$

16) $12x^2 - 68 = -4 + 16x + 4x^2$

$\{4, -2\}$

17) $12m^2 - 23m + 21 = -3 - 7m + 10m^2$

$\{6, 2\}$

18) $x^2 + 16x = -x^2 + 72$

$\{-4 + 2\sqrt{13}, -4 - 2\sqrt{13}\}$