

Solving Quadratic Equations By Completing the Square Date _____ Period _____

Solve each equation by completing the square.

1) $p^2 + 14p - 38 = 0$

$$\{-7 + \sqrt{87}, -7 - \sqrt{87}\}$$

2) $v^2 + 6v - 59 = 0$

$$\{-3 + 2\sqrt{17}, -3 - 2\sqrt{17}\}$$

3) $a^2 + 14a - 51 = 0$

$$\{3, -17\}$$

4) $x^2 - 12x + 11 = 0$

$$\{11, 1\}$$

5) $x^2 + 6x + 8 = 0$

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

6) $n^2 - 2n - 3 = 0$

$$\{3, -1\}$$

7) $x^2 + 14x - 15 = 0$

$$\{1, -15\}$$

8) $k^2 - 12k + 23 = 0$

$$\{6 + \sqrt{13}, 6 - \sqrt{13}\}$$

9) $r^2 - 4r - 91 = 7$

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

10) $x^2 - 10x + 26 = 8$

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

11) $k^2 - 4k + 1 = -5$

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

12) $b^2 + 2b = -20$

$$\{-1 + i\sqrt{19}, -1 - i\sqrt{19}\}$$