

Solving Quadratic Equations: Square Root Law

Solve each equation by taking square roots.

1) $r^2 = 96$

2) $x^2 = 7$

3) $x^2 = 29$

4) $r^2 = 78$

5) $b^2 = 34$

6) $x^2 = 0$

7) $a^2 + 1 = 2$

8) $n^2 - 4 = 77$

9) $m^2 + 7 = 6$

10) $x^2 - 1 = 80$

11) $4x^2 - 6 = 74$

12) $3m^2 + 7 = 301$

13) $7x^2 - 6 = 57$

14) $10x^2 + 9 = 499$

15) $(p - 4)^2 = 16$

16) $(2k - 1)^2 = 9$

17) $(6x + 2)^2 + 4 = 28$

18) $10(x - 7)^2 = 440$

19) $9(2m - 3)^2 + 8 = 449$

20) $4(6x - 1)^2 - 5 = 223$

Answers to Solving Quadratic Equations: Square Root Law

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| 1) $\{4\sqrt{6}, -4\sqrt{6}\}$ | 2) $\{\sqrt{7}, -\sqrt{7}\}$ | 3) $\{\sqrt{29}, -\sqrt{29}\}$ | 4) $\{\sqrt{78}, -\sqrt{78}\}$ |
| 5) $\{\sqrt{34}, -\sqrt{34}\}$ | 6) $\{0\}$ | 7) $\{1, -1\}$ | 8) $\{9, -9\}$ |
| 9) No solution. | 10) $\{9, -9\}$ | 11) $\{2\sqrt{5}, -2\sqrt{5}\}$ | 12) $\{7\sqrt{2}, -7\sqrt{2}\}$ |
| 13) $\{3, -3\}$ | 14) $\{7, -7\}$ | 15) $\{0, 8\}$ | 16) $\{2, -1\}$ |
| 17) $\{\frac{-1 + \sqrt{6}}{3}, \frac{-1 - \sqrt{6}}{3}\}$ | 18) $\{7 + 2\sqrt{11}, 7 - 2\sqrt{11}\}$ | 19) $\{5, -2\}$ | |
| 20) $\{\frac{1 + \sqrt{57}}{6}, \frac{1 - \sqrt{57}}{6}\}$ | | | |