

Solving Quadratic Equations Using the Quadratic Formula

Solve each equation with the quadratic formula.

1) $3n^2 - 5n - 8 = 0$

2) $x^2 + 10x + 21 = 0$

3) $10x^2 - 9x + 6 = 0$

4) $p^2 - 9 = 0$

5) $6x^2 - 12x + 1 = 0$

6) $6n^2 - 11 = 0$

7) $2n^2 + 5n - 9 = 0$

8) $3x^2 - 6x - 23 = 0$

9) $6k^2 + 12k - 15 = -10$

10) $8x^2 - 14 = -11$

11) $6k^2 + 2k + 9 = -3$

12) $12p^2 + 9p - 30 = -10$

13) $3x^2 = -7x + 136$

14) $3n^2 = -n + 14$

15) $6v^2 + 3 = -2v$

16) $9p^2 - 7 = 9p$

17) $11k^2 + 4k - 52 = 10k^2 - 7$

18) $-4a^2 + 18a - 15 = -7a^2 + 9a$

19) $-4n(n - 2) = 6(n + 3) - 11n^2$

20) $x(x - 3) = -7 - 10x$

Answers to Solving Quadratic Equations Using the Quadratic Formula

- 1) $\left\{2\frac{2}{3}, -1\right\}$ 2) $\{-3, -7\}$ 3) No solution. 4) $\{3, -3\}$
- 5) $\left\{\frac{6+\sqrt{30}}{6}, \frac{6-\sqrt{30}}{6}\right\}$ 6) $\left\{\frac{\sqrt{66}}{6}, -\frac{\sqrt{66}}{6}\right\}$ 7) $\left\{\frac{-5+\sqrt{97}}{4}, \frac{-5-\sqrt{97}}{4}\right\}$
- 8) $\left\{\frac{3+\sqrt{78}}{3}, \frac{3-\sqrt{78}}{3}\right\}$ 9) $\left\{\frac{-6+\sqrt{66}}{6}, \frac{-6-\sqrt{66}}{6}\right\}$ 10) $\left\{\frac{\sqrt{6}}{4}, -\frac{\sqrt{6}}{4}\right\}$
- 11) No solution. 12) $\left\{\frac{-9+\sqrt{1041}}{24}, \frac{-9-\sqrt{1041}}{24}\right\}$ 13) $\left\{5\frac{2}{3}, -8\right\}$
- 14) $\left\{2, -2\frac{1}{3}\right\}$ 15) No solution. 16) $\left\{\frac{3+\sqrt{37}}{6}, \frac{3-\sqrt{37}}{6}\right\}$
- 17) $\{5, -9\}$ 18) $\left\{\frac{-3+\sqrt{29}}{2}, \frac{-3-\sqrt{29}}{2}\right\}$ 19) $\left\{\frac{-1+\sqrt{127}}{7}, \frac{-1-\sqrt{127}}{7}\right\}$
- 20) $\left\{\frac{-7+\sqrt{21}}{2}, \frac{-7-\sqrt{21}}{2}\right\}$