

SOLVING BY USING THE QUADRATIC FORMULA



First, Memorize the Quadratic Formula:

The quadratic equation $ax^2 + bx + c = 0$ has solution $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$.

Remember the helpful saying:

The angry bee is deciding whether or not to go into the house where the other bees are square dancing and losing to 4 aces at the party that is all over at 2 am.

Second, Use the Quadratic Formula to solve the following equations:

1. $2x^2 - 7x - 9 = 0$

2. $p^2 - 4p + 4 = 0$

3. $9x^2 + 6x + 1 = 0$

4. $k^2 + 12k - 13 = 0$

5. $r^2 - 8r - 9 = 0$

6. $2x^2 + 12x = -5$

7. $5m^2 + m = 1$

8. $2x^2 = 5 + 3x$

9. $2z^2 = 30 + 7z$

10. $6x^2 + 6x = 0$

11. $4n^2 - 12n = 0$

12. $7x^2 = 12x$

13. $9r^2 = 11r$

14. $x^2 - 24 = 0$

15. $z^2 - 96 = 0$

16. $-2x^2 = -3x + 2$

17. $3x^2 - 2x + 5 = 10x + 1$

18. $-x^2 = -5x + 20$

19. $2x^2 + x + 5 = 0$

20. $4x^2 - x + 4 = x + 7$

Answers

1. $x = -1, \frac{9}{2}$

2. $p = 2$

3. $x = -\frac{1}{3}$

4. $k = -13,1$

5. $r = -1,9$

6. $x = \frac{-6 \pm \sqrt{26}}{2}$

7. $m = \frac{-1 \pm \sqrt{21}}{10}$

8. $x = -1, \frac{5}{2}$

9. $z = -\frac{5}{2}, 6$

10. $x = -1,0$

11. $n = 0,3$

12. $x = 0, \frac{12}{7}$

13. $r = 0, \frac{11}{9}$

14. $x = \pm 2\sqrt{6}$

15. $z = \pm 4\sqrt{6}$

16. \emptyset

17. $x = \frac{6 \pm 2\sqrt{6}}{3}$

18. \emptyset

19. \emptyset

20. $x = \frac{1 \pm \sqrt{13}}{4}$