

Practice 10-7

Using the Quadratic Formula

Use the quadratic formula to solve each equation. If the equation has no real solutions write *no real solutions*. If necessary, round your answers to the nearest hundredth.

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|---------------------------|----------------------------|----------------------------|
| 1. $x^2 + 8x + 5 = 0$ | 2. $x^2 - 36 = 0$ | 3. $d^2 - 4d - 96 = 0$ |
| 4. $a^2 - 3a - 154 = 0$ | 5. $4p^2 - 12p - 91 = 0$ | 6. $5m^2 + 9m = 126$ |
| 7. $r^2 - 35r + 70 = 0$ | 8. $y^2 + 6y - 247 = 0$ | 9. $x^2 + 12x - 40 = 0$ |
| 10. $4n^2 - 81 = 0$ | 11. $x^2 + 13x + 30 = 0$ | 12. $a^2 - a = 132$ |
| 13. $6w^2 - 23w + 7 = 0$ | 14. $4x^2 + 33x = 27$ | 15. $7s^2 - 7 = 0$ |
| 16. $x^2 + 5x - 90 = 0$ | 17. $5b^2 - 20 = 0$ | 18. $4x^2 - 3x + 6 = 0$ |
| 19. $6h^2 + 77h - 13 = 0$ | 20. $5y^2 = 17y + 12$ | 21. $g^2 - 15g = 54$ |
| 22. $27f^2 = 12$ | 23. $4x^2 - 52x + 133 = 0$ | 24. $x^2 + 36x + 60 = 0$ |
| 25. $a^2 - 2a - 360 = 0$ | 26. $x^2 + 10x + 40 = 0$ | 27. $t^2 - 10t = 39$ |
| 28. $4x^2 + 7x - 9 = 0$ | 29. $2c^2 - 39c + 135 = 0$ | 30. $4x^2 + 33x + 340 = 0$ |
| 31. $m^2 - 40m + 100 = 0$ | 32. $8x^2 + 25x + 19 = 0$ | 33. $36w^2 - 289 = 0$ |
| 34. $4d^2 + 29d - 60 = 0$ | 35. $4z^2 + 43z + 108 = 0$ | 36. $3x^2 - 19x + 40 = 0$ |
| 37. $14x^2 = 56$ | 38. $32x^2 - 18 = 0$ | 39. $r^2 + r - 650 = 0$ |
| 40. $2y^2 = 39y - 17$ | 41. $5a^2 - 9a + 5 = 0$ | 42. $x^2 = 9x + 120$ |
| 43. $8h^2 - 38h + 9 = 0$ | 44. $20x^2 = 245$ | 45. $9h^2 - 72h = -119$ |
| 46. $x^2 + 3x + 8 = 0$ | 47. $6m^2 - 13m = 19$ | 48. $9x^2 - 81 = 0$ |
| 49. $4s^2 + 8s = 221$ | 50. $6p^2 + 25p - 119 = 0$ | 51. $2s^2 - 59s + 17 = 0$ |
52. A rectangular painting has dimensions x and $x + 10$. The painting is in a frame 2 in. wide. The total area of the picture and the frame is 900 in.^2 . What are the dimensions of the painting?
53. A ball is thrown upward from a height of 15 ft with an initial upward velocity of 5 ft/s. Use the formula $h = -16t^2 + vt + s$ to find how long it will take for the ball to hit the ground.
54. Your community wants to put a square fountain in a park. Around the fountain will be a sidewalk that is 3.5 ft wide. The total area that the fountain and sidewalk can be is 700 ft^2 . What are the dimensions of the fountain?
55. The Garys have a triangular pennant of area 420 in.^2 flying from the flagpole in their yard. The height of the triangle is 10 in. less than 5 times the base of the triangle. What are the dimensions of the pennant?