

# Practice 10-6

## 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 to the nearest hundredth.

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  $900 \text{ in.}^2$ . 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  $700 \text{ ft}^2$ . What are the dimensions of the fountain?
  55. The Garys have a triangular pennant of area  $420 \text{ in.}^2$  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?

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