

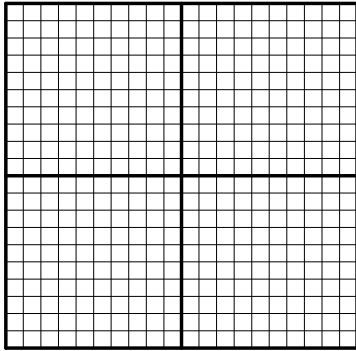
# Algebra II - Solving Quadratic Equations

SPI 3103.3.2 Solve quadratic equations and systems, and determine roots or a higher order polynomial.

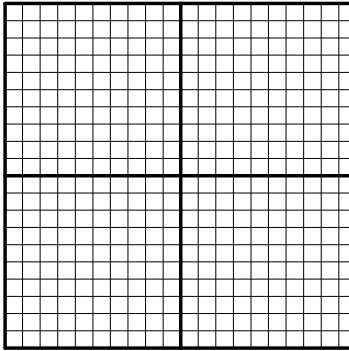
Solve each equation by using the indicated method. For each section, give exact answers in simplest radical form.

## Solve each equation by graphing.

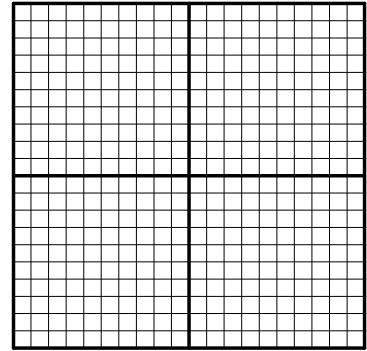
1.  $x^2 + 2x - 8 = 0$



2.  $3x^2 + 4x + 3 = 0$



3.  $x^2 + 10x + 25 = 0$



## Solve each equation by factoring.

4.  $x^2 - 3x - 10 = 0$

5.  $4x^2 = 11x$

6.  $3x^2 + 13x = 10$

7.  $4x^2 - 6 = -5x$

## Solve each equation by using the square root property.

8.  $x^2 = 49$

9.  $(x + 3)^2 = 11$

10.  $x^2 + 10x + 25 = -16$

11.  $9x^2 - 6x + 1 = 8$

**Solve each equation by completing the square.**

12.  $x^2 - 8x - 65 = 0$

13.  $x^2 + 19 = 14x$

14.  $2x^2 - 2x = 6$

15.  $4x^2 = -12x - 24$

**Solve each equation by using the quadratic formula.**

16.  $2x^2 - 7x - 4 = 0$

17.  $4x^2 - 12x = 63$

18.  $4x^2 + 17 = 4x$

19.  $x^2 = x - 1$

**Solve each equation by using the method of your choice.**

20.  $5(3x + 2)^2 - 4 = 26$

21.  $x^2 - 21 = 4x$

22.  $4x^2 - 3x = 6$

23.  $x^2 = 4x - 15$