Section 10.1

Solving Quadratic Equations by the Square Root Property

# Objective 1: Using the Square Root Property

Consider the quadratic equation . We can solve this equation by factoring and applying the zero factor property. In this section, we will consider another way to solve quadratic equations of this form. First, add to both sides of the equation.

Now, we see that the value of must be a number whose square is . There are two such numbers.

or

**Square Root Property:**

If for , then or .

Use the square root property to solve the quadratic equation. Simplify all radicals and rationalize denominators.

|  |  |
| --- | --- |
| a. | b. |
| c. | d. |
| e. | f. |

# Objective 2: Solving Problems Modeled by Quadratic Equations

If a circle has an area of square inches, what is the radius of the circle?