Section 8.6 Solving Radical Equations

# Objective 1: Solving Equations That Contain Radical Expressions

In this section, we shift from working with radical expressions to working with **radical equations**. Radical equations are equations that contain radical expressions. We will use the power rule to solve radical equations.

**Power Rule:**

If both sides of an equation are raised to some power, all solutions of the original equation are among the solutions of the new equation.

Solve the equation.

|  |  |
| --- | --- |
| a. | b. |

Notice that the power rule does not say that raising both sides of an equation to a power produces an equivalent equation. A solution of the new equation may or may not be a solution of the original equation. Check the solutions for the two equations above to confirm that they are solutions of the original equation.

When solving a radical equation, each solution found must be checked in the original equation. Recall that a proposed solution that is not a solution of the original equation is called an extraneous solution.

Solve the equation.

|  |  |
| --- | --- |
| c. | d. |

|  |  |
| --- | --- |
| e. | f. |

|  |  |
| --- | --- |
| g. | h. |