Section 8.6
Equations with Radical Expressions

A radical equation is one that includes at least one radical expression containing a variable.

To solve an equation with radical expressions, you must raise both sides of the equation to the same power. This is called the Power Rule.

When you use the power rule to solve an equation, every solution must be checked in the original equation.

Solve each equation.

\[ \sqrt{x + 1} = 7 \]
\[ \sqrt{7x - 3} = 5 \]

\[ \sqrt{5x - 3} = 0 \]
\[ \sqrt{5z + 1} - 11 = 0 \]

\[ \sqrt{4p - 2} = \sqrt{3p + 5} \]
\[ p = \sqrt{p^2 - 3p + 18} \]

\[ \sqrt{p^2 - 15p + 15} = p - 5 \]
\[ \sqrt[3]{p} - 1 = 2 \]

\[ \sqrt[4]{8z - 3} + 2 = 0 \]
$\sqrt{3x - 2} - \sqrt{x + 3} = 1$