

Solving Equations Containing Radicals

Algorithm for Solving Equations Containing Radicals

1. Isolate the radical
2. Raise both sides to a power equal to the index
3. Solve the resulting equation
4. Always, always check your answer!

Example 1 $\sqrt{x} - 2 = 4$

Example 2 Solve for x; $\sqrt{x} - 4 = 3$

Example 3 Solve for x; $\sqrt{x} - 2 = 3$

Example 4 Solve for x; $\sqrt{x + 4} + x = 8$

Example 5 Solve $\sqrt[3]{3x-9} - 2 = -4$

Example 6 Solve $\sqrt{x^2 - 8} = 2 - x$

Example 7 **Solve:** $\sqrt{x + 7} - 1 = \sqrt{x}$

Example 8 **Solve for x;** $\sqrt{x - 5} - \sqrt{x} = -1$