

Graphing and Solving Radical Equations

Solve

1) $\sqrt{x-2} = 2$

2) $\sqrt{5x-6} = x$

3) $\sqrt{13-x} - x + 1 = 0$

4) $\sqrt[3]{x+6} = 2$

Solving Radical Equations Graphically

1. Determine domain and range, if possible. (Sometimes range is difficult)
2. Sketch the graph of the left side of the equation accurately as possible .
3. Sketch the graph of the right side of the equation accurately as possible.
4. Find the point(s) of intersection of the two graphs. The solutions are the points of intersection.
5. **Another possible way** is to set the equation to 0 and graph the function.
Solution(s) is/are zeros(s) of graph.

Solving Equations with Radicals by ALGEBRA

Step 1. Isolate the radical on one side.

Step 2. Raise both sides of the equation to a power that is equal to the index of the radical.

Step 3. Solve the non-radical equation.

Step 4. Check all possible solutions in the *original equation* and reject any extraneous solutions. OR state the restrictions and check if the solution verifies the restriction.