

2.3 Solving Radical Equations:

Algebraically:

1. Isolate the radical.
2. Square/cube both sides to remove the radical.
3. Solve.
4. Check with original equation for extraneous solutions.

Graphically:

Find intersection points between LHS and RHS.

OR

Set one side to zero and find the roots.

Examples: Solve:

a.) $3\sqrt{x} = 12$

b.) $\sqrt{5x - 2} - 6 = 0$

c.) $5 + \sqrt{3x - 1} = 3$

$$d.) \sqrt{x+2} - x = 0$$

$$e.) \sqrt{3x+7} - x = 1$$

$$f.) \sqrt[3]{x-10} + x = 0$$