

Section 2.5: More Equation Solving

Key points:

- Solve rational equations.
- Solve radical equations.
- Solve absolute value equations.

Rational Equations:

1. Move *everything* to the LHS, zero on RHS.
2. Find the LCD.
3. Note any domain restrictions.
4. Multiply both sides by LCD.
5. Simplify.
6. The graph may be useful; be sure to check the solutions!

Radical Equations:

1. Isolate the radical (or one of the radicals).
2. Square both sides.
3. Simplify.
4. May have to return to Step (1) if there is more than one radical.
5. The graph may be useful; be sure to check the solutions!

Absolute Value Equations:

1. Isolate the absolute value:

$$|\text{“something”}| = c,$$

where c is some **real number** ≥ 0 ; if $c < 0$, then there is **no solution**.

2. Interpret $|\text{“something”}| = c$ as

$$\text{“something”} = c \quad \text{OR} \quad \text{“something”} = -c$$

and solve each of these equations.

3. The graph may be useful; be sure to check the solutions!