

Extraction of Roots

Another method of solving quadratic equations is the **extraction of roots**. This is very convenient if the equation has a squared term that can be isolated. Some examples are:

$$x^2 = 81$$

$$9x^2 - 23 = 0$$

$$(x-1)^2 = 25$$

$$(2x-10)^2 = 12$$

Process:

1. Isolate the squared term.
2. Take the square root of both sides of the equation.
Don't forget the " \pm " sign.
Simplify all radicals. Rationalize all denominators.
3. Solve the equation.

1. $x^2 = 81$

2. $9x^2 - 23 = 0$

3. $7x^2 - 4 = 0$

4. $(x-1)^2 = 25$

5. $(2x-10)^2 = 12$

6. $(5x+3)^2 = -28$