

$$x^6 + 36 = 100$$

Even exponents get \pm solutions!

$$7x^4 = 56$$

$$(x - 5)^4 = 256$$

Example 2 Solving equations with even exponents

$$6 - x^3 = 14$$

$$(2x + 5)^6 = 120$$

$$10 - (4x + 1)^5 = 25$$

Even exponents get \pm solutions!

Example 3 Harder examples

Solving Equations with Whole Number Exponents

Step 1: Isolate the variable or () on one side of the equation.

Step 2: Take the root of both sides using the exponent as the index of the root.

Step 3: Solve for the variable.

Example 1 Solving equations with odd exponents

$$x^3 + 40 = 25$$

$$2x^5 + 73 = 53$$

$$(x + 10)^5 = 70$$