

Radicals

$$\sqrt{4} = \pm 2$$

what multiplied by itself equals 4.

Square rooting is the opposite of squaring.

$$2^2 = 4$$

$$\sqrt{2^2} = \pm 2$$

$$\sqrt{4} = \pm 2$$

$$(\sqrt{2})^2$$

$$(\pm \sqrt{2})^2 = 2$$

cube roots

$$\sqrt[3]{8} = 2$$

what multiplied by itself 3 times equals 8?

$$(-2)^3 = -8 \quad \text{it is not also } -2$$

$$\sqrt[3]{-8} = -2$$

$$\sqrt[3]{(7)^3} = 7$$

$$\sqrt[3]{(-7)^3} = -7$$

7th root

$$\sqrt[7]{128} = 2$$

Using calculator

$$\sqrt{64} = 8$$

[2nd] [x²] [6] [4]

$$\sqrt[7]{128}$$

start by entering 7
math → 5: √

$$\sqrt{-4} = \text{undefined}$$

No Solution

Solving Equations

$$\sqrt{x^2} = \sqrt{144}$$

$$x = \pm 12$$

$$x^2 + 9 = 0$$

$$\sqrt{x^2} = \sqrt{-9}$$

| No Solution

$$x^3 + 8 = 0$$

$$\sqrt[3]{x^3} = \sqrt[3]{-8}$$

$$x = -2$$

$$\sqrt{\frac{9}{16}} = \frac{\sqrt{9}}{\sqrt{16}} = \frac{+3}{4}$$

$$\sqrt{1} = \pm 1$$