

Solving Radicals or Rational Exponents

Radical

Ex: $\sqrt{3} + 3 = 5$

Step 1) Isolate the Radical

2) Square or Cube or etc.

Both sides to get rid of the radical!

3) Finish solving the equation.

$$\sqrt{3x} + 3 = 5$$

- 3 - 3

Isolate

$$(\sqrt{3x})^2 = (2)^2$$

step 2

$$\frac{3x}{3} = \frac{4}{3}$$

step 3

$$x = \frac{4}{3}$$

$$3\sqrt[3]{2x-3} - 5 = 19$$

$$\begin{array}{r}
 \cancel{3\sqrt[3]{2x-3}} - 5 = 19 \\
 \hline
 \cancel{3\sqrt[3]{2x-3}} = 24 \\
 \hline
 (\sqrt[3]{2x-3})^3 = 8^3
 \end{array}$$

Isolating

$$2x - 3 = 512$$

$$\begin{array}{r}
 2x - 3 = 512 \\
 + 3 \quad + 3 \\
 \hline
 2x = 515 \\
 \frac{2x}{2} = \frac{515}{2}
 \end{array}$$

$$x = 257.5$$

Using Your Calculator

what is $\sqrt[3]{216}$

In your calculator press
the following Buttons.

3 2nd ∧ 216

\sqrt{x}