SQUARE ROOTS

THE INVERSE OF A SQUARE IS A SQUARE ROOT.

$\sqrt{1} = 1$

$\sqrt{4} = 2$

$\sqrt{9} = 3$

$\sqrt{16} = 4$

$\sqrt{25} = 5$

$\sqrt{36} = 6$

$\sqrt{49} = 7$

$\sqrt{64} = 8$

$\sqrt{81} = 9$

$\sqrt{100} = 10$

$\sqrt{121} = 11$

$\sqrt{144} = 12$

$\sqrt{169} = 13$

Aug 22-1:07 PM

ROOTS (CONTINUED)

THERE ARE INFINITE TYPES OF ROOTS

CUBE ROOTS

$\sqrt[3]{0} = 0$

$\sqrt[3]{1} = 1$

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

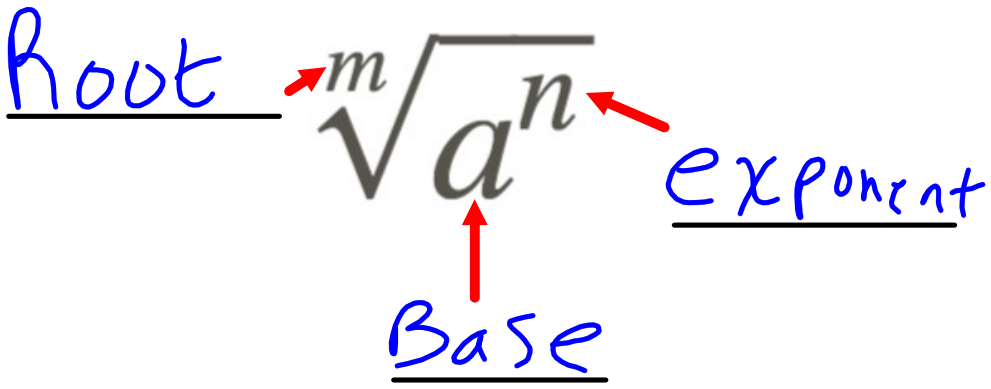
4TH,5TH, ETC. ROOTS

$\sqrt[4]{x}$ $\sqrt[5]{x}$

$\sqrt[7]{x}$

Aug 22-1:07 PM

ROOT PARTS



Aug 22-1:07 PM

RATIONAL EXPONENTS

YOU CAN WRITE RATIONAL EXPONENTS BY USING ROOTS.

RATIONAL EXPONENTS: Fraction

Root

EXP

EXP. (TOP)

$$\sqrt[m]{a^n} = a^{\frac{n}{m}}$$

Root (Bottom)

$$\sqrt[m]{a^n} = a^{\frac{n}{m}}$$

EXAMPLES:

1. Rewrite $\sqrt[4]{x^3}$

$x^{3/4}$

2. Rewrite $\sqrt{5x^3}$

$(5x)^{3/2}$

Aug 22-1:07 PM

$$\sqrt[m]{a^n} = a^{\frac{n}{m}}$$

EXAMPLES:

3. Rewrite $\sqrt[7]{x^2}$

$x^{2/7}$

4. Rewrite $\sqrt{2x}$

$(2x)^{1/2}$

Aug 22-1:07 PM

RATIONAL EXPONENTS

YOU CAN WRITE ROOTS BY USING RATIONAL EXPONENTS.

$$a^{\frac{n}{m}} = \sqrt[m]{a^n}$$

GO BACKWARDS

Aug 22-1:07 PM

EXAMPLES: $a^{\frac{n}{m}} = \sqrt[m]{a^n}$

1. Rewrite

$$a^{\frac{6}{5}}$$

$\sqrt[5]{a^6}$

2. Rewrite

$$(10n)^{\frac{3}{2}}$$

$\sqrt[2]{(10n)^3}$

Aug 22-1:07 PM

EXAMPLES: $a^{\frac{n}{m}} = \sqrt[m]{a^n}$

3. Rewrite $2^{\frac{5}{3}}$

$\sqrt[3]{2^5}$

4. Rewrite $(5x)^{-\frac{5}{4}}$

$\frac{1}{5x^{5/4}} = \frac{1}{\sqrt[4]{(5x)^5}}$

Aug 22-1:07 PM