

13.5 Rational Exponents and Radical Expressions

Name _____

- n^{th} **Root:** $\sqrt[n]{a^n}$
 - If n is even and a is positive, then:
 - If n is even and a is negative, then:
 - If n is odd, then:
 - n is called the index.

$$81^{3/2}$$

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$$(125a)^{2/3}$$

$$\sqrt[3]{19}$$

$$\sqrt[7]{x^4y^5z^3}$$

$$\left(m^{3/4}n^{-5/3}\right)^{2/7}$$

$$\left(\frac{2x^6yz^2}{4^{-1}y^{-2}z^8}\right)^{2/3}$$

$$\sqrt[3]{54}$$

$$\sqrt[5]{-\frac{32}{243}}$$

$$\sqrt[3]{-128x^9}$$

$$\sqrt[4]{9x^7y^2}\cdot\sqrt[4]{9x^2y^9}$$

$$\frac{\sqrt[3]{48a^7b^5}}{\sqrt[3]{6a^5b^4}}$$

$$\frac{\sqrt[5]{64a^{11}b^{28}}}{\sqrt[5]{2ab^{-2}}}$$