

8th Grade Lesson 47

- I can evaluate exponential expressions and radicals.



Exponential expressions designate a base and tell us how many times the base is to be used as a factor.

$$5^3 \text{ means } 5 \cdot 5 \cdot 5$$

When the base is a variable, the exponent tells us how many times the variable is to be used as a factor.

$$x^3 \text{ means } x \cdot x \cdot x$$

Evaluate:

$$m^2 \quad \text{if } m = 9$$

$$9^2 = 9 \cdot 9 = 81$$

Evaluate:

$$4^x \quad \text{if } x = 3$$

$$4^3 = 4 \cdot 4 \cdot 4 = 64$$

Evaluate:

$$\sqrt[n]{64} \quad \text{if } n = 3$$

$$\sqrt[3]{64} = 4$$

Evaluate:

$$\sqrt[3]{n} \quad \text{if } n = 27$$

$$\sqrt[3]{27} = 3$$

Assignment:

Problem Set 47

