

Section 9.1
Properties
of Radicals
Part 1

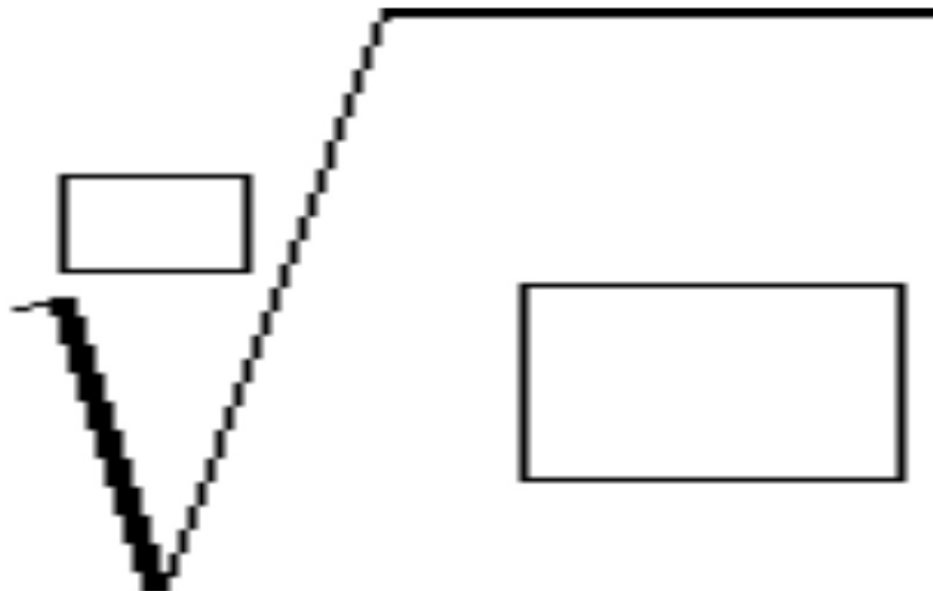
Vocabulary:

Radical Expression:

Radicand:

Simplest form:

- 1.
- 2.
- 3.



Keep in Mind!



KEY CONCEPTS
Product Property of radical expressions

KEY CONCEPTS
Quotient Property of radical expressions

Complete the perfect square and perfect cube list.

Perfect square list

$1^2 =$

$2^2 =$

$3^2 =$

$4^2 =$

$5^2 =$

$6^2 =$

$7^2 =$

$8^2 =$

$9^2 =$

$10^2 =$

$11^2 =$

$12^2 =$

$13^2 =$

$14^2 =$

$15^2 =$

$16^2 =$

$17^2 =$

$18^2 =$

$19^2 =$

$20^2 =$

Perfect cube list

$1^3 =$

$2^3 =$

$3^3 =$

$4^3 =$

$5^3 =$

$6^3 =$

$7^3 =$

$8^3 =$

$9^3 =$

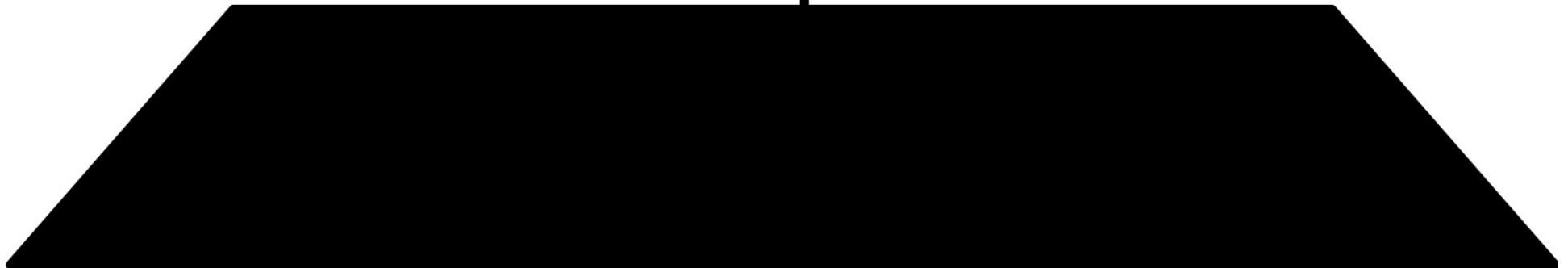
$10^3 =$

Lets practice!!!

Is the radical expression simplified? Drag radical expressions from the bottom and determine if the expression is simplified.

Simplified

Not simplified



Simplify the expression. Assume that variables are positive integers.

1. $\sqrt{108}$

2. $\sqrt{9x^3}$

3. $-\sqrt{24x^5}$

4. $\sqrt{-4x}$

5. $\sqrt[3]{16x^6}$

6. $\sqrt[3]{216a^7}$

7. $\sqrt[3]{-128}$

Simplify the expression. Remember that there cannot be a radical in the denominator of a fraction. Assume that variables are positive integers.

$$1. \frac{\sqrt{23}}{\sqrt{9}}$$

$$2. -\sqrt{\frac{98x^4}{16}}$$

$$3. \frac{\sqrt[3]{-64}}{\sqrt[3]{125x^6}}$$

$$4. \sqrt{\frac{1}{5}}$$

$$5. \frac{\sqrt{7}}{\sqrt{2}}$$

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

$$7. \sqrt[3]{\frac{m}{-27n}}$$

