Review Lesson 9
Simplifying Radicals

NAME:

Start by navigating to the Online Lesson for instructions.

Objective

Simplify square root and cube root expressions.

Introduced in:

Algebra 1: Principles of Secondary Mathematics
Lesson 29A

Simplifying Radicals

Fill in the notes as you watch the video in the Online Lesson.

- To simplify a radical, rewrite the expression with _____ exponents.
- The general form when rewriting a radical with rational exponents is:
- The _____ of a radical expression determines the value of the denominator of the rational exponent.
    - _____ root = Index 2
    - _____ root = Index 3

For examples in this Review Lesson, assume all variables have a positive value.

Example 1

Complete the example as you watch the video in the Online Lesson.

Simplify. Write the final answer in radical form.

$\sqrt{24x^3y}$

$24 = 2^3 \cdot 3$

$\sqrt{2^3 \cdot 3^1 \cdot x^3 \cdot y^1}$

Example 2

Complete the example as you watch the video in the Online Lesson.

Simplify. Write the final answer in radical form.

$\sqrt[3]{24x^{10}}$

Practice

For problems in this Review Lesson, assume all variables have a positive value.

Simplify. Write the answer in radical form.

1) $\sqrt{8a^4b^9}$

2) $\sqrt[3]{8a^4b^9}$

3) $\sqrt{25x^8y^{12}}$

4) $\sqrt[3]{25x^8y^{12}}$

5) $\sqrt{x^{22}y^{35}z^{40}}$

6) $\sqrt[3]{x^{22}y^{35}z^{40}}$

Simplify. Write the answer in radical form.

7) $\sqrt{27x^7y^5z^6}$

8) $\sqrt[3]{27x^7y^5z^6}$

9) $\sqrt{a^{18}b^{25}c^{15}}$

10) $\sqrt[3]{a^{18}b^{25}c^{15}}$

11) $\sqrt{48x^5}$

12) $\sqrt[3]{48x^5}$

To continue, return to the Online Lesson.