9.1 Simplifying Radical Expressions Product DAY ONE with work

Algebra Section 9.1

DAY 1: Simplifying Radical Expressions



- An expression that contains a square root is a radical expression.
- The expression under the radical sign is called the **radicand**.
- A radical is in simplest form when the radicand has no perfect square factors other than 1.

Product Property of Square Roots

For any two numbers **a** and **b**, where $\mathbf{a} \ge \mathbf{0}$ and $\mathbf{b} \ge \mathbf{0}$, the square root of the product **ab** is equal to the **product of each square root**.

$$\sqrt{ab} = \sqrt{a} \bullet \sqrt{b}$$

Apr 1-8:55 AM

Examples:

$$\sqrt{12} = \sqrt{4 \cdot 3} = \sqrt{4 \cdot \sqrt{3}} = 2\sqrt{3}$$

$$\sqrt{90} = \sqrt{9 \cdot 10} = \sqrt{9 \cdot 10} = \sqrt{9 \cdot 10} = \sqrt{3 \cdot 10}$$

Another way to think about it

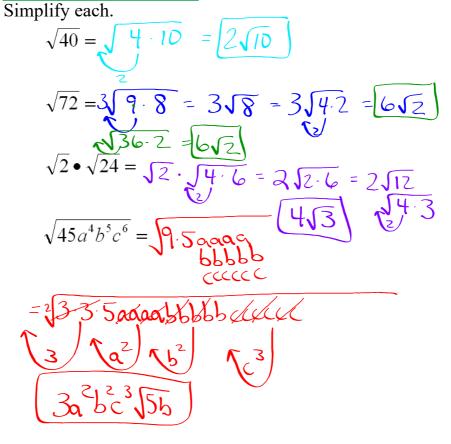
Think about the numbers that are perfect squares:

५ 9 16 25 36 49 64 81 100 121 Can you divide a perfect square out of the radicand? (५५



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Examples & Practice:



Apr 1-9:11 AM

$$\sqrt{50p^3} = \sqrt{5.5.2ppp} = \sqrt{5p\sqrt{2p}}$$
 $\sqrt{27xy^3} = \sqrt{3.3.3xyyy} = \sqrt{3y\sqrt{3xy}}$
 $\sqrt{108x^3y^4z^6} = \sqrt{6.3xxyyyyy} = \sqrt{27xy^2}$
 $\sqrt{27xy^3} = \sqrt{3}\sqrt{3}\sqrt{3}$

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Day One Assignment

9.1 Day One WS

Study Guide & Intervention Simplifying Radical Expressions

1 - 22 FRONT ONLY

(front today & back tomorrow)