SC Algebra 1
8.5 Simplifying Radical Expressions

Warm Up:

Complete the list of perfect squares:

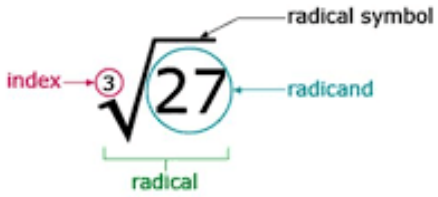
4, 9, ____, 25, ____, ____, 64, ____, 100, 121, ____, ____, 196, ____,

256, ____, 324, ____, 400

How can I meet today's standards?

*I can **simplify radical expressions with and without variables**.*

Radical Vocabulary Review



Example 1: Simplify Square Roots

Simplify.

$\sqrt{27}$ $\sqrt{72}$ $\sqrt{90}$

$\sqrt{200}$ $\sqrt{27}$ $\sqrt{32}$

Example 2: Multiply and Dividing Square Roots

Simplify.

$\sqrt{5} * \sqrt{48}$ $\sqrt{12} * \sqrt{44}$ $\sqrt{18} * \sqrt{5}$

$\sqrt{\frac{24}{27}}$ $\sqrt{\frac{81}{4}}$ $\sqrt{\frac{32}{8}}$

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Example 3: Simplify Square Roots with Variables

Simplify.

$\sqrt{g^4h^6j^2}$ $\sqrt{16x^5}$ $\sqrt{63x^3y^4}$

$\sqrt{12x^2y^4}$ $\sqrt{525x^4y^5z^5}$ $\sqrt{147x^3y^4z^5}$

$\sqrt{45p^2}$ $\sqrt{125n}$ $\sqrt{512k^2}$

$\sqrt{80p^3}$ $\sqrt{200m^4n}$ $\sqrt{75x^2y}$