NAME _____

Module 17 Simplifying Radical Expressions
Lesson 4 Dividing Radicals

guided notes

Lesson Objectives

- Divide rational expressions containing radicals.
- Simplify radical expressions using the conjugate.

The Quotient Property of Square Roots states that for any numbers $a \geq 0$ and $b > 0$, $\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$.

1. Simplify: $\sqrt{\frac{36}{z^2}}$ $\frac{6}{|z|}$

2. Simplify: $\frac{\sqrt{20}}{\sqrt{5}}$ 2

A radical expression is in simplest form when there are:

1. No square factors other than one under the radical sign.
2. No fractions under the radical sign.
3. No radicals in the denominator.

3. Simplify: $\frac{1}{\sqrt{12}}$ $\frac{\sqrt{3}}{6}$

4. Simplify: $\sqrt{\frac{d^2}{6}}$ $\frac{|d|\sqrt{6}}{6}$

$\sqrt{7} + \sqrt{2}$ and $\sqrt{7} - \sqrt{2}$ are conjugates.

5. Simplify: $\frac{1}{1 + \sqrt{3}}$ $\frac{-1 + \sqrt{3}}{2}$ or $\frac{1 - \sqrt{3}}{-2}$