

Section 10.5—Rationalizing Denominators

How do I know when a radical expression is SIMPLIFIED?

1. The _____ has no _____ raised to a power greater than or equal to the _____.
2. The _____ has no _____.
3. _____ in the radicand and the _____ have no common factor.
4. There are no _____ in the denominator.

Example Simplify the following expression.

$$\frac{3}{\sqrt{7}}$$

What rule does this break?

How could you get rid of the radical in the denominator?

How do I RATIONALIZE A DENOMINATOR?

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

$$\frac{6}{\sqrt{12}}$$

$$\sqrt{\frac{11}{18}}$$

$$\frac{11}{\sqrt{7b}}$$

How do I rationalize a
CUBE/FOURTH ROOT?

$$\sqrt[3]{\frac{6}{5}}$$

$$\frac{7}{\sqrt[4]{3}}$$

How do I rationalize a
BINOMIAL
DENOMINATOR?

$$\frac{3}{2 - \sqrt{5}}$$

$$\frac{5\sqrt{3}}{\sqrt{2} + 4\sqrt{6}}$$

Summary: