Lesson 22 (5.6): Roots (part 2)

By the end of the lesson, you will be able to:

- ★ Simplify radicals by using distribution and FOIL
- ★ Simplify radicals by rationalizing the denominator
- ★ Finding conjugates to rationalize denominators

Lesson 22 (5.6): Roots (part 2)

Review: Simplify each

1st: $3\sqrt{5} \cdot 10\sqrt{15}$

2nd: $4\sqrt{10} \cdot 5\sqrt{10}$

Lesson 22 (5.6): Roots (part 2)

Multiplying using the distributive property

Just like multiplying polynomials, we can distribute and FOIL radical expressions.

Examples:

1. $\sqrt{5}(\sqrt{3}+2\sqrt{2})$

2. $6\sqrt{2}(4-\sqrt{5})$

Lesson 22 (5.6): Roots (part 2)

More Examples

a. $(\sqrt{6}+\sqrt{3})(\sqrt{3}+\sqrt{2})$

b. $(2\sqrt{3}+4)(\sqrt{3}+6\sqrt{5})$

Lesson 22 (5.6): Roots (part 2)

Examples continued

c. $(4\sqrt{5}+2\sqrt{7})(4\sqrt{5}-2\sqrt{7})$

d. $(12+\sqrt{3})(12-\sqrt{3})$

Lesson 22 (5.6): Roots (part 2)

By the end of the lesson, you will be able to:

- ★ Simplify radicals by using distribution and FOIL
- ★ Simplify radicals by rationalizing the denominator
- ★ Finding conjugates to rationalize denominators

Lesson 22 (5.6): Roots (part 2)

Journal #22 - Part a:

Pg. 293: 21-49 odds

Due at the end of math lab

Assignment #22:

Due at the beginning of BI class