Algebra 1.5 7.4 **Adding and Subtracting Rational Expressions with Different Denominators**

* Find the LCD of two or more rational expressions.
* Given two rational expressions, write equivalent rational expressions with their LCD.
* Add or subtract rational expressions with different denominators.

**To find the LCD of two or more rational expressions:**

1. Find the \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of each \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. Write a product that contains each unique prime factor the greatest number of times that factor occurs in any factorization. Or if you prefer to use exponents, write the product that contains each unique prime factor raised to the greatest exponent that occurs on that factor in any factorization.

3.\_\_\_\_\_\_\_\_\_\_\_\_\_ the product found in step 2.

**Example 1:**  Find the LCD of

**Example 2:**  Find the LCD of $ $

**Example 3:**  Write as equivalent rational expressions

with their LCD.

**Example 4:**  Write as equivalent rational expressions with their LCD.

**To add or subtract rational expressions with different denominators,**

1. Find the \_\_\_\_\_\_\_\_\_\_\_\_\_.

2. Write each rational expression as an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ expression with the LCD.

3. Add or subtract the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and keep the LCD.

4. Simplify.

**Example 5:** Add

**Example 6:** Add

**Example 7:** Add

**Homework:** Pg 525 #34-70 even