Math 3 **5.2 Adding and Subtracting Rational Expressions** Unit 5

*EQ: How do you simplify the addition and subtraction of rational expressions?*

In order to add or subtract fractions, we must first find the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |  |
| --- | --- |
| **Arithmetic of Rational Numbers** | **Arithmetic of Rational Expressions** |
|  |  |
|  | b) |
|  | c) |

**Monomial Denominators-FIND A COMMON DENOMINATOR!**

* determine what each denominator has that the other denominator is missing
* multiply top and bottom by whatever is missing-to give you the common denominator

**Example 1:**

**Example 2: **

**Example 3: **

**Example 4: **

**Bi/Trinomial Denominators** – **FACTOR & FIND A COMMON DENOMINATOR!**

* Always start by factoring polynomial denominators
* Multiply top and bottom by whatever is missing and then combine the numerators

**Example 5:**

**Example 6:**  

**Example 7:** 

**Example 8:** 

**Example 9:** 

**Example 10:**

**Simplifying Complex Fractions**

* Multiply the top fraction by the reciprocal (flip) of the denominator fraction

**Example 11:** 

**Example 12:** 

**Example 13:** 

**Example 14:**