

Notes – Operations with Rational Expressions

Multiplying Rational Expressions

1. Factor all numerators and denominators
2. Cancel out common factors
3. Group terms in numerators and denominators
4. Multiply numerators across
5. Multiply denominators across

Dividing Rational Expressions

1. Rewrite as multiplication of the reciprocal
2. Multiply as above

Adding or Subtracting Rational Expressions

1. Find the least common denominator (LCD)
2. Multiply each expression as needed to get the LCD in each
3. Group terms in the numerators
4. Add (or subtract) the numerators and put over the LCD
5. Factor the numerator and simplify if possible

Simplifying Complex Fractions

1. Simplify the numerator by adding or subtracting (if needed)
2. Simplify the denominator by adding or subtracting (if needed)
3. Rewrite as multiplication of the reciprocal
4. Multiply as above