**8.4 Rational Expressions**.  
Objective: To Simplify rational expressions.  
To multiply and divide rational expressions.

**Rational Expression:** quotient of two polynomials

**Simplest Form:** when numerator and denominator are polynomials that have no common factors

**Steps to Simplifying a Rational Expression**:

1. Factor numerator and denominator
2. Divide out any factors that are common to both the numerator and denominator

*Examples in Simplest Form: Examples NOT in Simplest Form:*

**Simplifying Rational Expressions and State Restrictions  
 -See Worksheet 1**

**Multiplying Rational Expressions**:

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1. Multiply numerators
2. Multiply denominators
3. Write new fraction in simplified form

*Examples of Multiplication:*

**Multiplying Rational Expressions and State Restrictions**

**-See Worksheet 2**

*Extra:*

* *

**Dividing Rational Expressions**:

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1) Find the reciprocal of the denominator

2) Multiple the numerator by the reciprocal of the denominator

3) Multiply numerators

4) Multiply denominators

5) Write new fraction in simplified form

*Examples of Division: (multiplication by the reciprocal)*

**Dividing Rational Expressions and State Restrictions**

**-See Worksheet 3**

*Extra:*





**HMWK: page 530 #1-8, 9-25 (odd), 27, 33-35 (odd)** *and/or WORKSHEETS*