Name: _____ /10 **Instructor:** _____

Date: _____ **Class Time:** _____

Unit 7 Module A Notes Sections 20.1 - 20.3

View the PowerPoint, Videos, or Textbook for Module 7A.

Vocabulary ***Fill in the blanks.***

1. (Section 20.1) Expressions that have the same value for all possible replacements for the variables are called _____ _____ .

2. (Section 20.1) Rational numbers are quotients of _____ ___, and rational expressions are quotients of _____ .

3. (Section 20.1) Expressions of the form $a - b$ and $b - a$ are _____ of each other.

4. (Section 20.2) Two expressions are _____ of each other if their product is 1.

Problems ***Show ALL steps.***

1. (Section 20.1) Find all numbers for which this rational expression is undefined:

$$\frac{5x + 1}{5x^2 - 24x - 5}$$

2. (Section 20.1) Multiply, but do not simplify: $\frac{y-5}{5-y} \cdot \frac{-1}{-1}$

3. (Section 20.1) Simplify: $\frac{5a^2+10a-40}{5a^2+30a+40}$

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4. (Section 20.1) Multiply and simplify: $\frac{t^2+10t-11}{t^2-1} \cdot \frac{t+1}{t+11}$

5. (Section 20.2) Divide and simplify: $\frac{x^2+3x}{x^2+2x-3} \div \frac{x}{x+1}$

6. (Section 20.2) Find the Least Common Multiple (LCM)
   a. 6 , 9 , 21

   b. $9-4y^2$, $3+2y$, $3-2y$