Name: _____ **Instructor:** _____

Date: _____ /10 **Class Time:** _____

Unit 7 Module B Notes Sections 20.4 - 20.7

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

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

1. (Section 20.4, 20.5) To add or subtract rational expressions with different denominators:
   a. Find the __ __ __ of the denominators: this is known as the Least Common Denominator (LCD)
   b. For each rational expression, find __ _____ _____ with the LCD
   c. Add or subtract the _____ and write the sum over __ _____
   d. _____ if possible.

2. (Section 20.6) There are two methods for simplifying complex rational expressions:
   a. _____ _ __ _____ of all denominators
   b. _____ in the numerator and denominator

3. (Section 20.7) To solve a rational equation, a good first step is to ____ _____ by multiplying _____ _____ by the _____ of all denominators.

Problems ***Perform the indicated operation and simplify your answer. Show ALL steps.***

1. (Section 20.4) $\frac{2(4x+1)}{5x-7}+\frac{3(x-2)}{7-5x}+\frac{-10x-1}{5x-7}$

2. (Section 20.5) (Hint: $(b-a)=-(a-b)$) $\frac{3}{12+p-p^2}-\frac{2}{p^2-9}$

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Simplify

3. (Section 20.6)

$$\frac{\frac{4}{y}}{4+\frac{1}{y}}$$

4. (Section 20.6)

$$\frac{\frac{p}{6q^3}+\frac{4}{6q}}{\frac{5}{6q^3}-\frac{1}{2q^3}}$$

Solve: Answer with an integer or simplified fraction

5. (Section 20.7) $\frac{1}{10}+\frac{1}{25}=\frac{1}{x}$

6. (Section 20.7) $\frac{y+5}{y-2}=\frac{y-2}{y+4}$

7. (Section 20.7) $\frac{5}{p-3}-\frac{30}{p^2-9}=1$