Precalculus Honors

Expressions and Equations

LEARNING PLAN

(Chapter 3)

Name: _____

Date: _____

Period:____

G___

Skill/Understanding:	Review/Practice Problems
Rational Expressions ❑ I can rewrite the numerator and denominator of a rational expression in factored form. ❑ I can identify giant ones to help simplify rational expressions. ❑ I understand that I cannot "cancel" terms when the numerator and denominator are in standard form. ❑ I can rewrite a rational expression with addition and/or subtraction so that each term has a common denominator (multiply each term by a giant one). ❑ I can add and subtract rational expressions. ❑ I can multiply and divide rational expressions ❑ I can identify which values need to be excluded (cause division by zero). ❑ I can write a partial fraction decomposition as in lesson 3.1.1.	3-12, 3-13, 3-30, 3-42, 3-56, 3-78, 3-109 (a) and (b), 3-137, and CL 3-147 (a) and (b). Lesson 3.1.1
Complex Fractions ❑ I can multiply a complex fraction by a giant one so that it is no longer a complex fraction. ❑ I can simplify complex fractions completely.	3-28, 3-42 (d), 3-73, 3-109 (c), and CL 3-147 (c). Lesson 3.1.2
Polynomial Division ❑ I can divide polynomials using an area model. ❑ When I have a remainder using polynomial division I can represent the remainder as a fraction.	3-54, 3-70, 3-95, 3-136, and CL 3-149. Lesson 3.1.4
U-substitution ❑ I can use u-substitution to rewrite complex fractions so that it is easier for me to factor. ❑ I can use u-substitution to rewrite and solve complex equations.	3-29, 3-55, 3-79, and CL 3-146. Lesson 3.1.2
Systems of Equations ❑ I can solve systems of equations using elimination. ❑ I can solve systems of equations using substitution. ❑ I can solve non-linear systems of equations. ❑ I can check my solutions to see if any solutions are extraneous.	3-17, 3-35, 3-41, 3-71, 3-108, 3-124, and CL 3-148. Lesson 3.1.3

PRACTICE PROBLEMS:

Complete the following problems on a separate piece of paper.

1) Simplify:

a. $(x+y) \div \left(\frac{1}{x} + \frac{1}{y}\right)$ b. $\frac{x}{x+y} - \frac{x-y}{x}$ c. $\frac{3x^{-3}+4x}{2x-x^{-2}}$

2) Complete the following division problem. Express any remainder as a fraction.

$$\frac{2x^3+x^2-19x+36}{x+4}$$

3) Solve for x and give answers in exact form:

a. $(3x-2)^2 + 8(3x-2) + 12 = 0$ b. $x - 6x^{1/2} + 4 = -5$

c. $2xy + 5 = x - 4y$

4) Solve the system of equations:

$$x^2 + y^2 = 74$$
$$x^2 - y^2 = 24$$

5) Complete a partial fraction decomposition for $\frac{8x+7}{(x+2)(x-1)}$.