

Unit 4 Quiz Review

Name: _____

Simplify completely:

$$1.) \frac{x+4}{3x^2+11x-4}$$

$$2.) \frac{3x-9}{x^2+x-12}$$

$$3.) \frac{x+3}{x^2-2x+1} \div \frac{x+3}{x-1}$$

$$4.) \left(\frac{x^2-16}{x^2-4x+4} \right) \left(\frac{x-2}{x^2+6x+8} \right)$$

$$5.) \frac{\frac{x-2}{x-1}}{\frac{x^2-4}{x^2+x-2}}$$

$$6.) \frac{\frac{x}{3} + \frac{x}{4}}{\frac{x^2-3x}{6x-12}}$$

Add or subtract as indicated:

$$7.) \frac{x-5}{3x+4} - \frac{3x-5}{3x+4}$$

$$8.) \frac{x+2}{x^2+4x+3} - \frac{x+1}{x+3}$$

$$9.) \frac{x}{x-3} + \frac{2}{x^2-9}$$

$$10.) \frac{2}{x+3} + \frac{5}{x-2}$$

State the values for x which make the expression undefined.

$$11.) \frac{x-2}{x^2-16} \div \frac{x-1}{x+7} \quad x \neq \underline{\hspace{4cm}}$$

12.) Find the LCM of $x^2 + 2x + 1$ and $x^2 - 4x - 5$