Name _____ Date _____ Pd _____

Chapter 7 TEST REVIEW

7.1 Direct and Inverse Variation

Determine whether each data set represents an inverse variation, a direct variation or neither. Find k, constant of variation, when possible. Show all work. Plug values into the equations.

x	y
3	5
6	14
8	21

x	y
6.5	8
13	4
104	.5

x	y
5	30
8	48
12	72

Consider the following rational expressions:

A: $\frac{x-2}{6}$ B: $\frac{5}{x^2}$ C: $\frac{x^2+4x-8}{30x}$

1. Use any combination of the above and create an addition problem. Find the simplified form.

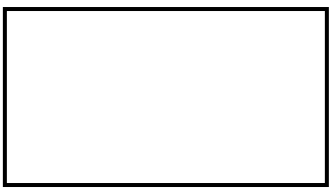
2. Use any combination of the above and create a subtraction problem. Find the simplified form.

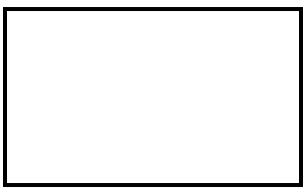
3. Use any combination of the above and create a multiplication problem. Find the simplified form.

4. Use any combination of the above and create a complex fraction. Find the simplified form.

5. Find the product of all three of the above. Find the simplified form.

Multiply and simplify: $\frac{3-12x^2}{2x^2-15x-8} \cdot \frac{x^2-5x-24}{8x^2-28x+12}$ Find the LCD: $\frac{5}{6x^2-28x+16}$; $\frac{1}{3x^2-2x}$





Divide and simplify: $\frac{8x^2+6x-9}{25x^2-10x+1} \div \frac{4x^2+5x-6}{5x^2+9x-2}$

Add and simplify: $\frac{7x}{x-9}+\frac{3x}{9-x}$

Add and simplify: $\frac{x}{x^2+3x-4}+\frac{4x}{x^2+7x+12}$

Find the domain in interval notation: $\frac{2x}{2x^2+3x-20}$

Solve for x. $\dfrac{3x}{x^2+5x+6}+\dfrac{2}{x^2+x-2}=\dfrac{5x}{x^2+2x-3}$

Simplify: $\dfrac{\dfrac{4}{x-3}-\dfrac{2}{x+2}}{\dfrac{8}{x^2+6x+8}}$

Simplify: $\dfrac{\dfrac{6}{x+1}-\dfrac{4}{x+2}}{\dfrac{5}{x+2}-\dfrac{3}{x+1}}$