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Name _	Kev	

Pd Date

Chapter 7 TEST REVIEW

☐ Use when you get it right all by yourself

S Use when you did it all by yourself, but made a silly mistake

#Use when you could do it alone with a little help from teacher or peer

6 Use when you completed the problem in a group

X Use when a question was attempted but wrong (get help)

NUse when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Direct, Inverse, & Joint Variation	1		
Constant of variation	1		
Writing variation equations	1		
Adding rational expressions		2, 10	11
Subtracting rational expressions		3	
Multiplying rational expressions	4	6	7
Complex Fractions	5	14	15
Finding an LCD		8	
Dividing rational expressions	9		
Domain restriction in interval notation		12	
Solving rational equations		13	

Put all your work on a separate sheet of paper.

7.1 Direct and Inverse Variation

1) 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	У
3	5
6	14
8	21

neither

6.5 13 104

X	У
5	30
8	48
12	72

Consider the following rational expressions:

A:
$$\frac{x-2}{6}$$

B: $\frac{5}{r^2}$

C:
$$\frac{x^2 + 4x - 8}{30x}$$

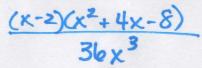
AtC 2. Use any combination of the above and create an addition problem. Find the simplified form.

A-53. Use any combination of the above and create a subtraction problem. Find the simplified form. 5, x-2

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

form.

Solution of the above and create a complex fraction. Find the simplified form. 6. Find the <u>product</u> of all three of the above. Find the simplified form.



7. Multiply and simplify:
$$\frac{3-12x^2}{2x^2-15x-8} \cdot \frac{x^2-5x-24}{8x^2-28x+12}$$

8. Find the LCD:
$$\frac{5}{6x^2 - 28x + 16}$$
; $\frac{1}{3x^2 - 2x}$ **2x (3x-2)**

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

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

11. Add and simplify:
$$\frac{x}{x^2 + 3x - 4} + \frac{4x}{x^2 + 7x + 12}$$
 $\frac{x(5x-1)}{(x+4)(x+3)(x-1)}$

12. Find the domain in interval notation:
$$\frac{2x}{2x^2+3x-20}$$
 (-\alpha, -4)\(\mathbf{U}\)(-4,\(\frac{2}{2}\)\(\frac{2}{2}\)\(\epsilon\)

13. Solve for
$$x$$
. $\frac{3x}{x^2 + 5x + 6} + \frac{2}{x^2 + x - 2} = \frac{5x}{x^2 + 2x - 3}$ $\times = \frac{1}{2}$

14. Simplify:
$$\frac{\frac{4}{x-3} - \frac{2}{x+2}}{\frac{8}{x^2 + 6x + 8}}$$
 (x+7)(x+4)

15. Simplify:
$$\frac{\frac{6}{x+1} - \frac{4}{x+2}}{\frac{5}{x+2} - \frac{3}{x+1}}$$
 2(x+4)

CYU Reflection: How far can you go: basic, intermediate, or advanced?

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

