C. Shore ALGEBRA 2

 QUIZ #14
 Concepts & Procedures 1 = \_\_\_\_\_ = Critical Thinking

 Rational Expressions
 Concepts & Procedures 2 = \_\_\_\_\_\_
 = Communicate Reasoning

 Constructing Models = \_\_\_\_\_\_
 = Creativity
 = Collaboration

#### **Concepts & Procedures 1**

1-3) Simplify & chose the appropriate domain for the list offered at the right.

1. 
$$\frac{6x+24}{6}$$
  
2.  $\frac{x^2+x-30}{3x-15}$   
3.  $\frac{x^2-36}{x^2-6x}$   
• All Real Numbers  
•  $x \neq 5$   
•  $x \neq 15$   
•  $x \neq 0, x \neq 6$   
•  $x \neq 0, x \neq 5$ 

4. Which expressions are equivalent?

A) 
$$\frac{6w+7p}{18}$$
 B)  $\frac{11}{6}\left(\frac{2w+14p}{11}\right)$  C)  $\frac{8w}{3} + \frac{14p}{6} - \frac{7w}{3}$ 

# **Concepts & Procedures 2** 5-7) Solve

5. 
$$\frac{x+2}{14} = \frac{x}{x+5}$$
 6.  $\frac{h}{6} + \frac{h}{5} = 1$  7.  $0 = \frac{g-7}{g-10}$ 

Name \_\_\_\_\_

### **Constructing Models**

8. Julio paves a driveway in 7 hours. Zach does the same job in 9. How long would it take them complete pave driveway together?

9-11) It cost Blanca \$1500 to start her backpack making business. It also cost her \$10 to make each backpack. Write an equation that relates the Cost, C, to the number of Backpacks, b. Then graph your equation for a domain [0, 100] and offer three points that serve as solutions to your equation.



### **Critcial Thinking**

12. For the diagram below, the smaller interior rectangle has a length that is 3 units longer than its height. The larger rectangle is four times taller than the smaller. It length is 6 units longer than twice the height of the smaller, as shown. Show that the ratio of the larger area to the smaller will always be 8.



#### **Communicate Reasoning**

13. Kayla noticed that for all work problems of the form,  $\frac{x}{a} + \frac{x}{b} = 1$ , the solution is always the quotient of the product of a & b, and the sum of a & b:  $x = \frac{ab}{a+b}$ 

Explain why you agree or disagree with Kayla.

## Creativity

14. Write the equation of a logarithmic function that has an asymptote of x = 3 and an x-intercept of (0, 4). Then graph your equation.

