Name:______School:______Teacher:______School:_____

Grade 7, Lesson 1, Writing, Evaluating and Finding Equivalent Expressions with Rational Numbers

Three friends went to the movies. Each purchased a medium-sized popcorn for *p* dollars and a small soft drink for *s* dollars.

a. Write the expression that represents the total amount of money (in dollars) the three friends spent at the concession stand.

- b. The concession stand charges \$6.50 for a medium-sized popcorn and \$4.00 for a small soft drink. Find the total spent on refreshments if...
 - The friends buy 3 popcorn and 3 drinks.

• The friends buy 2 popcorns and 4 drinks.

• The friends buy 5 popcorns and 2 drinks.

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Grade 7: Lesson 2 Use Properties of Operations to Generate Equivalent Expressions

Rewrite these expressions as equivalent expressions without using a calculator

- a. 3(2*x*)
- b. 4*y*(5)
- c. 4(2)(*z*)
- d. 3(2x) + 4y(5)
- e. 3(2x) + 4y(5) + 4(2)(z)
- f. Alexander says that 3x + 4y is equivalent to 3(4) + xy because of any order, any grouping. Is he correct? Why or why not?

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Grade 7: Lesson 3 Simplifying and Proving Expressions

Simplify each expression. Verify that your expressions are equivalent by evaluating each expression using x = 5.

- a. 3x + (2 4x)
- b. 3x + (-2 + 4x)
- c. -3x + (2 + 4x)
- d. 3x + (-2 4x)
- e. 3x (2 + 4x)
- f. 3x (-2 + 4x)
- g. 3x (-2 4x)
- h. 3x (2 4x)
- i. -3x (-2 4x)

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Grade 7: Lesson 4 Inec	Jualities		
Solve each inequality. Ju	stify your answers.		
a. x−7≤9			
b. x + 7 ≤ 9			
c. x + 7 ≤ -9			
d. x - 7 ≤ -9			
e. 3x > 9			
f3x > 9			
g. 3x > -9			
-			

h. -3x > -9

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Grade 7: Lesson 5 Real world inequalities

Solve the inequality and interpret the solution:

The carnival owner pays the owner of an exotic animal exhibit \$650 for the entire time the exhibit is displayed. The owner of the exhibit has no other expenses except for a daily insurance cost. If the owner of the animal exhibit wants to make more than \$500 in profits for the 5 ½ days, what is the greatest daily insurance rate he can afford to pay?