Name:_____**Date:**_____**Per:**_____

Chapters 1 and 2 Assessment
Study Guide

1.2: Simplify using the order of operations

Ex: $8 + 10 \div 5 - 3$

Ex: $5^2 - 8 \cdot 2$

Ex: $\dfrac{16 \cdot 3 - 4}{16 - 3 \cdot 4}$

Ex: $25 - (2 + 2) \cdot 3$

1.3-1.4 Translate the verbal phrase into an algebraic expression, equation, or inequality

Ex: The product of 11 and the sum of 7 and a number x is at least 12.

Ex: The quotient of a number b and 15 is no more than 40.

Ex: The number of days in w weeks.

1.3: Find the unit rate

Ex: $75 for 5 video games

Ex: 32 pencils in 8 boxes

Ex: Your monthly cell phone bill is $35, which includes the first 450 minutes. You must pay a fee for each minute you go over. Last month you paid $8.80 for using 40 extra minutes.

    a) Find the cost per minute for each extra minute.

    b) Write an expression to represent your total cost for any number of *extra* minutes.

    c) Find the total cost if you used 35 extra minutes.

1.4 Is a given number a solution or not

Check whether the given number is a solution to the equation or inequality. Show your work.

Ex: $6x + 7 = 25$; $x = 3$　　　　　　**Ex:** $\dfrac{m}{3} + 30 < 33$; $m = 9$　　　　　　**Ex:** $6a + 9 \geq 21$; $a = 2$

2.5: Apply the Distributive Property

    - Be able to use the distributive property and identify and combine like terms

Ex: $(p - 3)(-8)$　　　　　　　　　　　　　　**Ex:** $3(m + 5) - 10$

Ex: $6r + 2(r + 4)$　　　　　　　　　　　　　**Ex:** $4 - 2(x - 3) - 3x$

(ACC Only) You are saving to buy a new iPhone. Two of your neighbors have jobs that you can do for them. One neighbor will pay you $7 an hour to walk her two dogs and another neighbor will pay you $10 an hour to babysit. Your parents will only let you work 10 hours per week.

a) Use the information to write a <u>simplified expression</u> to represent the total amount of money you can make if you spend w hours walking dogs and the remaining hours babysitting.

b) Find the total amount of money you will make if you spend 7 hours a week walking dogs and the remaining hours babysitting.

- **Be able to simplify division problems using the distributive property**

Ex: $\dfrac{6x-14}{2}$ **Ex:** $\dfrac{9z-6}{-3}$ **Ex:** $\dfrac{-24a-10}{-8}$

2.7: Find Square Roots and Compare Real Numbers

Ex: $x^2 = 49$ **Ex:** $\pm\sqrt{100}$ **Ex:** $-\sqrt{3600}$

Ex: Estimate $\sqrt{101}$ between 2 integers   **Ex:** Estimate $-\sqrt{72}$ between 2 integers

Evaluate each expression:

Ex: $2\sqrt{x} - 4$ when $x = 25$ **Ex:** $\sqrt{x+1} - 5$ when $x = 15$