Geometry Lomac 2015-2016 Date 9/14 due 9/15 **Linear Word Problems** | 1.3L

☐ **DO NOW –** On the back of this packet

Name _____

LO: I can use inverse operations to write and solve multiple step equations to answer word problems. I can use BUCKS to help me do this.

☐ (1) **Need to know**

pencil/pen

BUCKS: When answering a word problem:

BOX: Put a _____ around the question.

UNDERLINE & UNDERSTAND: _____ important information and understand it by drawing or rewriting.

CIRCLE: _____ vocabulary

KNOCK OUT: _____ unnecessary information and do any necessary work

SENTENCE & SENSE: Write your answer in a s_____ AND make sure your answer makes _____

☐ (2) **Using BUCKS**

pencil/pen

(a) The sum of a number and five more than the number is 17. What is the number?

☐B ☐U ☐C ☐K ☐S

(b) Write an equation to represent the statement:

The difference between twice a number and a number that is 5 more than it is 3.

☐B ☐U ☐C ☐K ☐S

(1) $2n - n + 5 = 3$ (3) $n + 5 - 2n = 3$

(2) $n - (2n + 5) = 3$ (4) $2n - (n + 5) = 3$

☐ (3) **Using BUCKS**

pencil/pen

☐B   ☐U   ☐C   ☐K   ☐S

A tile warehouse has Inventory at hand and can put in for a back order from a supplier of bundles of tiles. Currently they have 38 tiles of a certain kind in stock, and can only order more in groups of 12 tiles per bundle. The equation that represents this order is as follows;

$$\text{The number of tiles} = 12b + 38, \text{where } b \text{ is the number of bundles ordered.}$$

(a) If a customer needs 150 tiles, how many bundles will need to be ordered? Explain how you got your answer. Why do we need to round our answer up in this problem?

(b) If the store likes to keep 30 tiles in stock at all times how many bundles do they need to order now, after selling the 150 tiles to the customer? Think about how many you had left over from the customer who ordered 150 tiles.

☐ (4) **Using BUCKS**

pencil/pen

(a) Evie and her father are comparing their ages. At the current time, Evie's father is 36 years older than her.

Three years from now, Evie's father will be five times her age at that point. How old is Evie now?

☐B   ☐U   ☐C   ☐K   ☐S

(b) Kirk has 12 dollars less than Jim. If Jim spends half of his money, and Kirk spends none, then Kirk will have two dollars more than Jim. How much money did they both start with?

☐B   ☐U   ☐C   ☐K   ☐S

☐ (5)   **Using BUCKS**
pencil/pen

☐B   ☐U   ☐C   ☐K   ☐S

There is a competition at the local movie theater for free movie tickets. You must guess all four employees' ages given a few clues. The first clue is that when added together, their ages total 106 years. Kirk is twice ten years less than the manager's age, Brian is 12 years younger than twice the manager's age, and Matt is 6 years older than half the manager's age. What are all four of their ages? It may help to set up four let statements, one for each employee (including the manager).

☐ (6)   **Using BUCKS**
pencil/pen

☐B   ☐U   ☐C   ☐K   ☐S

Tanisha and Rebecca are signing up for new cellphone plans that only charge for the number of minutes and everything else is included in a monthly fee. Their plans are as follows:

Tanisha's plan: $0.15 per minute used talking and a $25 monthly fee.
Rebecca's Plan: $0.10 per minute used talking and a $18.50 monthly fee.

(a) Figure out after how many minutes the two plans will charge the same amount?

(b) Interpret your answer. It may help to read their two plans again and think about which one you would rather pay.

☐ (7) **Using BUCKS** (CC exam Aug 2015)

pen or
pencil,
square
paper

☐B ☐U ☐C ☐K ☐S

A typical cell phone plan has a fixed base fee that includes a certain amount of data and an overage charge for data use beyond the plan. A cell phone plan charges a base fee of $62 and an overage charge of $30 per gigabyte of data that exceed 2 gigabytes. If C represents the cost and g represents the total number of gigabytes of data, which equation could represent this plan when more than 2 gigabytes are used?

(1) $C = 30 + 62(2 - g)$

(2) $C = 30 + 62(g - 2)$

(3) $C = 62 + 30(2 - g)$

(4) $C = 62 + 30(g - 2)$

(7) Exit Ticket

ON THE LAST PAGE

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(8) Homework

pen or
pencil,
square
paper

FLUENCY

1. The sum of three times a number and 2 less than 4 times that same number is 15. Which of the following equations could be used to find the value of the number, n? Explain how you arrived at your choice.

   (1) $3n + 4n - 2 = 15$ (3) $4n + 3(n-2) = 15$

   (2) $3n + 4(n-2) = 15$ (4) $3n - 4(n-2) = 15$

2. Create a let statement for the following examples. Be sure to carefully read the question and figure out exactly what you are looking for. Then, set up an equation that summarizes the information in the problem and solve the equation and check for reasonableness.

(a) The sum of 3 less than 5 times a number and the number increased by 9 is 24. What is the number?
(b) Tom is 4 more than twice Andrews age. Sara is 8 less than 5 times Andrews age. If Tom and Sara are twins, how old is Andrew?
(c) A wireless phone plan costs Eric \$35 for a month of service during which he sent 450 text messages. If he was charged an fixed fee of \$12.50, how much did he pay per text?
(d) Daniel is currently 26 years older than his son. In six years he will be three times older than his son. How old are both of them now?

Exit Ticket   Name_____ Date _____ Per_____   1.3L

(1) The LO (Learning Outcomes) are written below your name on the front of this packet. Demonstrate your achievement of these outcomes by completing the problems below:

Use BUCKS and justify your work clearly:

To watch a varsity basketball game, spectators must buy a ticket at the door. The cost of an adult ticket is $3.00 and the cost of a student ticket is $1.50. If the number of adult tickets sold is represented by a and student tickets sold by s, which expression represents the amount of money collected at the door from the ticket sales?

(1) $4.50as$ (3) $(3.00a)(1.50s)$

(2) $4.50(a + s)$ (4) $3.00a + 1.50s$

DO NOW   **Name**_____ **Date** _____ **Per**_____   **1.3L**

(1) Look through the following work, find the mistake, and circle it. Then, to the side, show the appropriate work.

$$\frac{-2(x-3)}{5} = 4$$

$$5 \cdot \frac{-2(x-3)}{5} = 4 \cdot 5$$

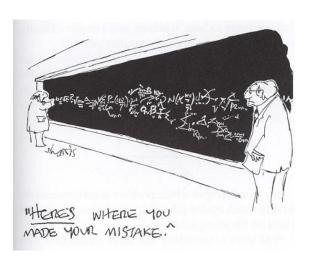$$-2(x-3) = 20$$

$$-2x-6 = 20$$

$$-2x-6+6 = 20+6$$

$$-2x = 26$$

$$\frac{-2x}{-2} = \frac{26}{-2}$$

$$x = -13$$

(2) Describe why the cartoon below is supposed to make people smile.   REALLY think about it.

If you still aren't sure, describe what is happening in the cartoon.

"HERES WHERE YOU MADE YOUR MISTAKE."