Use this review guide to prepare and study for the Computation & Constructed part of the final exam

1. YOU WILL NEED TO KNOW HOW TO DO THE FOLLOWING:

- a. Compute quotients of fractions divided by fraction & mixed numbers
- b. Compute quotients of whole numbers
- c. Decimal operations (adding, subtracting, multiplying, dividing)
- d. Apply LCM and GCF using real world situations
- e. Find Ratios, rates, unit rates and proportions
- f. Find Percent of a number (whole, part, percent)
- g. Identify parts of expressions, inequalities, and equations
- h. Find equivalent expressions using distributive property, factoring, and combining like terms
- i. Solve and graph inequalities
- j. Solve equations using whole numbers, decimals, and fractions
- k. Write equations and expressions from real world situations
- 1. Graph equations on a coordinate plane
- m. Find the area of triangles, quadrilaterals, and composite figures
- n. Find and apply volume of a prism
- o. Find surface area of prisms and pyramids
- p. Identify integers on a number line
- q. Compare and order rational numbers
- r. Identify coordinates and quadrants on a coordinate plane
- s. Find the distance between points on a number line and coordinate plane
- t. Represent integers in real world situations

2. SAMPLE PROBLEMS

a.	Zameah's dog eats $\frac{1}{5}$ pound of dog food each day. If Zameah buys a 35-
	pound bag of food, how many days will she be able to feed her dog?

b. Color pencils come 12 in a pack, and markers come 8 in a pack. What is the LEAST number of packs of each product that can be purchased to have an equal number of color pencils and markers with none leftover?

c. Christian bought 12-pounds of gummy bears from sprouts for \$0.65 per pound. How much money did he pay for the gummy bears?

d. A semi-truck can hold 50 cases of bottled water. How many semi-trucks will be needed for 515 cases?

e. An aircraft has a total of 325 seats. Only 125 seats were occupied during the flight from Atlanta to Tampa. What is the ratio of the number of seats that were occupied to the number of seats that were NOT occupied? (REMEMBER TO SIMPLIFY YOUR ANSWER)

f. Jennifer and Maribel put a percentage of their earnings into a savings account. Jennifer put 15% of \$120 into savings. Maribel put 20% of \$110 into savings. Who put the most in savings and by how much?

g. The table shows how much money Wal-mart receives for selling different amounts of bananas.

Number of Pounds	Total Sales
3	\$7.50
5	\$12.50
7	\$17.50

If the unit rate is constant, what are the total sales form 13 pounds of bananas?

h. Groupon has a 25% off the total price of landscaping the front yard. How much will Hailey save if cost to landscape her front yard is \$120 when she uses the Groupon?

i. Identify the parts of the expression 6n - 15.

j. Write <u>two</u> equivalent expressions using <u>factoring</u> for

8w + 24

k. Use the *distributive property* for write an equivalent expression for

7(3m + 6)

1. Simplify the expression

$$4x^2 + 8x + 14 + 5x^2 - 7x$$

m. Write an expression that is equivalent to 54

n. A rectangular garden has a length of 7x feet and a width of 7x + 3 feet.



Write an expression that represents the area of the garden.

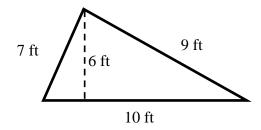
o. Solve the value of x in the equation.

$$x + \frac{5}{6} = \frac{7}{8}$$

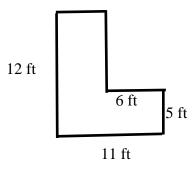
p. Graph the inequality $x \le 7$ on a number line.

q. List 3 solutions that make the inequality b > 7.5 true.

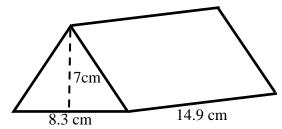
r. Find the area of the triangle.



s. The letter L is going to be painted in the teacher parking lot at Lindley Middle school. The diagram shows the dimensions of the letter. What is the area of the "L"



t. Find the surface area of the triangular prism.



u. The Gooden Moving Company has trucks available for rental. The most common truck rented is illustrated below. The truck's dimensions are 12.5 feet long, 5 feet wide, and 6 feet tall.



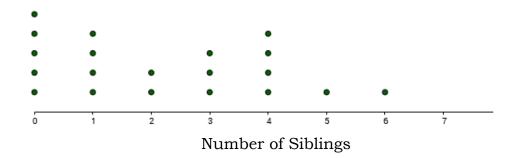
If Brianna has 400 cubic feet of furniture to move will there be enough space in the truck for her to move her furniture? Explain your reasoning.

v. Kianna earned \$17, \$19, \$23, \$15, and \$16 babysitting her little brother for 5 nights. Find the *measures of center* for the money Kianna earned for babysitting.

w. Draw a box plot using the data below

{10, 11, 5, 8, 12, 6, 3, 15, 20, 21, 15}

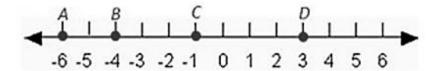
x. Anthony asked his classmates how many siblings they had. He organized the data into a dot plot. What is the shape of the dot plot?



y. If the temperature in Alaska on a Monday morning was -8° C. The temperature rose by 10 degrees by the afternoon. What was the temperature in Alaska in the afternoon?

z. What type of coordinates that are located in Quadrant 3 of the coordinate plane?

aa. Use the number line below to write an inequality that is TRUE and an inequality that is FALSE.



bb. List the rational numbers in order from greatest to least

$$-0.75, 0, \frac{1}{2}, -1, -\frac{1}{2}$$