Name_____ Date_____

8th Grade Summer MATH Assignment …**Please place a BOX around your answer. SHOW all work. Attach looseleaf if necessary.**

1.) A website charges $0.99 to download a game and a $12.49 membership fee. Write an expression that gives the total cost in dollars to download *g* games. Then find the cost of 6 games.

2.) Name the property shown:

a. X + Y = Y + X b.) (5 + x) + 0 = 5 + x

3.) Use the Distributive Property to evaluate each expression:

a. 3(5 + 6) b.) 6(5 – q) c.) -3(5 – b) d.) (d + 2)(-7)

4.) Write 7x – 2 – 7x + 6 in simplest form.

5.) Write 2g – 3 + 11 – 8g in simplest form.

6.) Find 2(x + 3) + (3x + 1).

7.) Find 6(x + 7) + (x + 3).

8.) Find (4x – 4) – (-2x + 2).

9.) Find (6x + 5) – (3x + 1).

10.) **Factor** each expression:

a. 3x + 6 b.) 12x + 30y c.) 2x – 15 d.) 14f – 16g

11.) **SOLVE** each equation:

a. Y + 15 = 11
b. -32 = -4b
c. $-3\frac{1}{3} = -\frac{1}{2}g$
d. $2x + 4 = 10$
e. -4w – 4 = 8
f. $\frac{2}{3}(n + 6) = 10$

12.) -73 > 15 + 11x

Integers (negative and positive whole numbers including zero)
Multiplying/dividing/adding/subtracting

13) - 5 X -9 = _____

14) -9 X 12 = _____

15) - 3 X 0 = _____

16) -4 + 12 = _____

17) 0 + -9 = _____

18) -4 + - 2 = _____

19) - 5 - (-11) = _____

20) 9 - (-8) = _____

21) -7 –(-4) = _____

22) -35 divided by -7 = _____

23) - 42 divided by 3 = _____

FRACTIONS:

24) ½ divded by ¾ =

25) ½ divided by 3 and ½ =

26) 9 and ¼ divide by 1/6 =

27) -1/2 + -2/3 =

28.) As a salesperson, Audrey earns $75 per week plus $5 per sale. This week, she wants her pay to be at least $125. Write and solve an inequality for the number of sales Audrey needs to make. Interpret the solution.

29.) Ten cards numbered 1 through 10 are mixed together and then one card is drawn. Find the probability of each event. Write each answer as a fraction, decimal, and percent.

a.) P(8) b.) P(odd) c.) P(divisible by 3) d.) P(not a multiple of 4)

30.) Find the sample space from picking a number 1 through 5 and choosing the color red, white, or blue.

31.) A cafeteria offers oranges, apples, or bananas as its fruit option. It offers peas, green beans, or carrots as the vegetable option. Find the number of fruit and vegetable options. If the fruit and the vegetable are chosen at random, what is the probability of getting an orange and carrots? Is it likely or unlikely that a customer would get an orange and carrots?

32.) A child has wooden blocks with the letters G, T, R, I, E. Find the probability that the child randomly arranges the letters in the order TIGER.

33.) A carnival game wheel has 12 equal sections. One of the sections contains a star. To win a prize, players must land on the section with the star on two consecutive spins. What is the probability of a player winning?

34.) Mrs. Almedo's class has 5 students with blue eyes, 7 with brown eyes, 4 with hazel eyes, and 4 with green eyes. Two students are selected at random. Find each probability.

a. P(green then brown) b.) P(two blue) c.) P(hazel then blue)

35.) After 2.4 hours, Jenny had traveled 216 miles. If she travels at a constant speed, how far will she have traveled after 4 hours?

36.) Find each unit rate.

a. 360 miles in 6 hours b.) 6,840 customers in 45 days c.) $7.30 for 5 pounds

37.) Pep club members are making spirit buttons. They make 490 spirit buttons in $3\frac{1}{2}$ hours. Find the number of buttons the Pep Club makes per hour.

38.) Doug entered a canoe race. He rowed $2\frac{1}{2}$ miles in $\frac{1}{4}$ hour. What is his average speed in miles per hour?

39.) A remote control car travels at a rate of 10 feet per second. How many inches per second is this?

40.) A skydiver is falling at about 176 feet per second. How many feet per minute is he falling?

41.) Uptown Tickets charges $7 per baseball game ticket plus a $3 processing fee per order. Is the cost of an order proportional to the number of tickets ordered? Explain.

Cost ($)	10	17	24	31
Tickets Ordered	1	2	3	4

42.) What do graphs of proportional relationships look like?

43.) Sydney bought 8 gallons of gas for $32.50. Write an equation relating the cost c to the number of gallons g of gas. How much would Sydney pay for 11 gallons of gas at this rate?

44.) Solve each proportion:

a. $\frac{k}{7} = \frac{32}{56}$ b.) $\frac{3.2}{9} = \frac{n}{36}$ c.) $\frac{41}{x} = \frac{5}{2}$

45.) Sheila is still mixing paint. She mixed 8 ounces of blue paint with 7 ounces of yellow paint. She decided to create 45 ounces of the same mixture. How many ounces of blue paint does Sheila need for the new mixture?

46.) For every left- handed person, there are about 4 right-handed people. If there are 60 students in the 7^{th} grade, predict the number of students who are right-handed.

47.) A recipe for making 3 dozen muffins requires 1.5 cups of flour. At this rate, how many cups of flour are required to make 5 dozen muffins?

48.) Find the constant rate of change for the table.

Time (s)	1	2	3
Distance (m)	6	12	18

49.) Find 150% of 28

50.) Find 5% of 300

51.) Estimate 79% of 489.

52.) What percent of 60 is 15?

53.) 12 is 90% of what number?

54.) Jessie estimates the weight of her cat to be 10 pounds. The actual weight of the cat is 13.75 pounds. Find the percent error. (Percent change)

55.) A restaurant bill comes to $28.35. Find the total cost if the tax is 6.25% and a 20% tip is left on the amount before tax.

56.) A cell phone is on sale for 30% off. If the sale price is $239.89, what is the original price?

57.) A boogie board that has a regular price of $69 is on sale at a 35% discount. What is the sale price with 7% tax?

Have a great summer!!!