Name_____ Date_____

7th Grade Summer MATH Assignment – Show all of your work and circle your answer. Staple looseleaf if necessary.

Ratio and Proportions

1.) Find the greatest common factor (GCF) of 12 and 18.

2.) Find the least common multiple of 4, 5, and 10.

3.) Last month, Ed ate 9 apples, 5 bananas, 4 peaches, and 7 oranges. Find the ratio of bananas to the total number of fruit. Then explain its meaning.

4.) Write each rate as a unit rate:
   a. 44 points in 4 quarters b.) 12 meters in 28 seconds c.) 125 feet in 5 seconds

5.) A zoo requires that 1 adult accompany every 7 students that visit the zoo. How many adults must accompany 28 students?

6.) Felisa read the first 60 pages of a book in 3 days. She read 90 pages in 6 days. Are these reading rates equivalent? Explain your reasoning.

7.) The Martinez family drove 105 miles on 4 gallons of gas. At this rate, how many miles can they drive on 6 gallons of gas?

8.) Write 0.25 in word form.

9.) Write each decimal as a fraction in simplest form.
   a. 0.6 b.) 0.45 c.) 0.375

10.)The average length of a conch shell is 9.87 inches. Express 9.87 inches as a mixed number in simplest form.

11.) Write $\frac{9}{12}$ as a decimal.

12.) In a recent survey, 55% of cell phone owners said they text message. What fraction of cell phone owners is this?

13.) Write $\frac{6}{8}$ as a percent.

14.) Write 0.38 as a percent.

15.) Write 4% as a decimal.

16.) Write $1\frac{1}{4}$ as a percent.

17.) Write 600% as a decimal.

18.) What is 15% of 300?

19.) 225 is 75% of what number?

The Number System

1.) Find the difference of 5.774 and 2.371.

2.) Find the sum of 23.1 and 5.8.

3.) Find 4 x 0.012.

4.) Find 3.6 x 0.05

5.) Find 351÷ 9.

6.) Find 7.24 ÷ 7.

7.) $2 \times \frac{2}{5} =$

8.) $\frac{3}{4} \times \frac{5}{6} =$

9.) $\frac{1}{5} \div \frac{5}{7} =$

10.) Write $-\frac{2}{9}$ as a decimal.

Greatest Common Factor….Find the GCF for the following pairs of numbers

11.) 16 and 20 = _____

12.) 40 and 50 = _____

13.) 36 and 48 = _____

14.) 60 and 95 = _____

15.) 7 and 84 = _____

16.) 12 and 15 = _____

17.) 18 and 24 = _____

Least Common Multiple….Find the LCM for the following pairs of numbers

18.) 5 and 9 = _____

19.) 4 and 12 = _____

20.) 7 and 12 = _____

21.) 3 and 5 = _____

22.) 8 and 11 = _____

23.) 6 and 8 = _____

24.) 12 and 2 = _____

25.) 9 and 10 = _____

Find the area of the following triangles:

26.)triaingle has a base of 8 inches and a height of 9 inches

27.)triaingle has a base of 12 cm and a height of 15 cm

28.)triaingle has an area of 60 inches squared, it has a base of 8 inches, what is its height?

29.)triaingle has a base of 16 ft and a height of 1/2 ft

30.)triaingle has a base of 18 m and a height of 12 m

Expressions & Equations

1.) Write 6 x 6 x 6 x 6 using an exponent.

2.) Write 1.5^{3} as a product of the same factor. Then find the value.

3.) 20 ÷ 4 + 17 x (9 – 6) =

4.) Evaluate $5t + 4 \quad if\ t = 3.$

5.) Write the phrase *5 less than 3 times the number of points* as an algebraic expression.

6.) Write the phrase *2 less than one third of the points* as an algebraic expression.

7.) Use the Distributive Property to rewrite each algebraic expression.

a. 3(x + 1) b.) 5(2x + 7) c.) 7(3x + 5y)

8.) Simplify each expression:

a.) 2x + 4x + 8x b.) 5(x + 2) + 3x c.) 6(2x + 1) – 5x + 7

9.) Factor 10x + 15y.

10.) Solve each equation mentally. No work needed

a.) M + 4 = 17 b.) 12 = 24 – y c.) 54 = 6b d.) 10r = 90

11.) Ruben and Tariq have 245.5 downloaded minutes of music. If Ruben has 132 minutes, how many belong to Tariq? Write and solve an addition equation to find how many minutes belong to Tariq.

12.) Pete is 15 years old. This is 6 years younger than his sister Victoria. Write and solve a subtraction equation to find Victoria's age.

13.) Solve 2x = 14

14.) 6.5a = 32.5

15.) $\frac{w}{6} = 35$

16.) Find the next two terms in each sequence:

a. 4, 16, 28, 40, …. b.) 1.5, 3.9, 6.3, 8.7, …

17.) Isaiah is buying jelly beans. In bulk, they cost $3 per pound, and a candy dish for $2. The function rule, 3x + 2 where x is the number of pounds, can be used to find the total cost of x pounds of jelly beans and 1 dish. Make a table that shows the total cost of buying 2, 3, or 4 pounds of jelly beans and 1 dish.

Pounds (x)	3x + 2	Cost ($) (y)
2		
3		
4		

18.) Solve the following inequalities:

a.) $2 + y < 3$ b.) $7x > 56$ c.) $w - 1 \leq 4$

Statistics

1.) **Challenge!** Jamila babysat nine times. She earned $15, $20, $10, $12, $20, $16, $80, and $18 for eight babysitting jobs. How much did she earn the ninth time if the mean of the data set is $24?

2.) The list shows the number of stories in the 11 tallest buildings in Springfield. Find the median and mode of the data.

40, 38, 40, 37, 33, 30, 20, 24, 21, 17, 19

Have a great summer!