SUMMER MATH PACKET – ENTERING MATH 6

Writing Numerical Expressions:

1.) Sophie has 7 boxes of chips for a party. Each box has 12 bags of potato chips. Sophie gives half of the boxes to her mom to store in the pantry.

a.) **Write an expression** that represents the total number of bags of chips Sophie's mom put in the pantry.

b.) Use your expression to find how many bags of chips are in the pantry.

2.) Which expression represents "*divide the sum of 11 and 17 by the product of 7 and 8*"?

a.) $(8 \times 7) \div (11 + 7)$ b.) $(11 + 17) \div (8 \times 7)$

c.) $11 + 17 \div 8 \times 7$ d.) $8 \times 7 \div 11 + 17$

3.) Sheila made 44 cupcakes. Her sister made 37 cupcakes. Her brother ate 3 cupcakes. The remaining cupcakes will be sold in boxes containing 6 cupcakes each.

a.) **Write an expression** that represents the total number of boxes of cupcakes that can be made.

b.) Use the expression to find the number of cupcake boxes.

Number Concepts:

Put the number in order from least to greatest.

4.) 2.31, 2.013, 2.103, 2.3, 2.03   5.) $2\frac{3}{4}$, $2\frac{2}{3}$, $2\frac{1}{2}$, $3\frac{1}{10}$, $2\frac{1}{5}$

Compare using <, >, or =.

6.) 17.52 _____ 17.503   7.) 4.5 _____ 4.50   8.) $\frac{2}{5}$ _____ $\frac{7}{8}$

9.) $2\frac{1}{4}$ _____ $2\frac{3}{12}$ 10.) 5.9 _____ $5\frac{3}{10}$

Powers of Ten: Solve using mental math.

11.) 27 x 100   12.) 4,800 ÷ 10   13.) 5.4 x 1,000

14.) 29.12 ÷ 100   15.) 8.437 x 10

16.) Explain how you can use mental math to multiply and divide decimals and whole numbers by powers of ten (10, 100, 1000, etc.)

Rounding: Round the number to the given place value.

17.) 4,186.7289; tens place   18.) 5,273.2856; hundredths place

19.) 432,987,504.28; hundred thousands place

Whole Number and Decimal Operations:

20.) 328.65 + 76.213   21.) 27.8 + 542   22.) 1,523.7 – 834.3

23.) 395 – 28.6   24.) 423 x 256   25.) 8012 x 43

26.) 5,135 ÷ 65   27.) 0.45 ÷ 4.5

Fraction Concepts:

28.) Tom makes a cake for a class party. The recipe calls for $\frac{5}{8}$ cup of orange juice and $\frac{5}{12}$ cup of water.

Can Tom use a one-cup container to hold both the orange juice and water at the same time? **Explain your thinking.**

29.) For each description in the table below, write whether the quantity is less than 1 or more than 1.

Description	Quantity	More or less than 1?
4 pizzas shared equally among 7 people	Number of pizzas per person	
5 packs of crayons shared equally among 3 children	Number of crayon packs per child	
30 packages of pencils shared equally between 24 tables	Number of tables needed	

30.) Maria had 12 liters of Kool-aid. She poured all of the Kool-aid into 8 pitchers so that there was an equal amount in each pitcher. How many liters of Kool-aid did Maria pour into each pitcher?

31.) When $\frac{1}{4}$ is multiplied by a number less than 1, which of the following is always true?

a.) The product is greater than 1.   b.) The product is equal to 1.

c.) The product is less than $\frac{1}{4}$.   d.) The product is greater than $\frac{1}{4}$.

32.) In the expression $\frac{3}{4} \times n$, n represents a whole number. Select the statement below that describes the product.

a.) The product is less than n.   b.) The product is greater than n.

c.) The product is equal to n.

Explain your choice.

33.) Jessica has $\frac{1}{3}$ of a bag of dog food to divide evenly between her 2 dogs. What fraction of the whole bag does Jessica give each of her dogs? (You can draw a picture to help you solve the problem.)

34.) A hiker carried 1 gallon of water on a hike. She drank $\frac{1}{2}$ of the water when she stopped to rest and gave an equal amount of the remaining water to each of 3 friends. What fraction of the 1 gallon of water did **each** friend receive? (You can draw a picture to help you solve the problem.)

Fraction Operations:

35.) $\frac{5}{6} - \frac{3}{4}$

36.) $\frac{2}{3} + \frac{1}{5}$

37.) $5\frac{5}{8} - 2\frac{1}{4}$

38.) $10\frac{3}{4} + 8\frac{2}{5}$

39.) $8 - 3\frac{1}{3}$

40.) $\frac{1}{2} + \frac{2}{3} + \frac{3}{4}$

Order of Operations: Solve the problems. Remember to use order of operations.

41.) 15 x (13 + 24)

42.) 12 + 8 x 12 – 9 ÷ 3

43.) 3,500 ÷ (34 + 8 x 2) – 4

44.) 6 x (400 + 100) – 250 ÷ 5

45.) $\frac{3}{4} - \frac{1}{2} + \frac{2}{3}$

Measurement:

46.) Paul bought 4 meters of wood trim. He used 72 centimeters to frame a photo of his dog and three times that length to frame a photo of a friend. What length, in **meters**, of wood trim remained after Paul made the frames?

47.) Mrs. Jones bought 6 kilograms of rice. After filling 10 containers with the same amount of rice in each, she had 860 grams remaining. How grams of rice are in each of the 10 containers?

48.) Carla needs 8 inches of ribbon for each craft she makes. What is the greatest number of crafts Carla can make using 30 feet of ribbon?

Geometry:

Write the number of sides the polygon has and then sketch a picture of the polygon.

49.) trapezoid   50.) hexagon   51.) pentagon

  # of sides = _____   # of sides = _____   # of sides = _____

52.) Find the volume of a box that is 16 feet by 5 feet by 9 feet.

53.) The volume of a rectangular prism is 576 cubic feet. What is the height of the box if it is 8 feet long and 12 feet wide?