

# SUMMER MATH PACKET

5<sup>TH</sup> GRADE ENTERING 6<sup>TH</sup> GRADE



Name \_\_\_\_\_

**Write Numbers in Words and Digits**

Exercises: Write the number name.

1. 560.08

2. 7.016

3. 24.47

4. 6,003

5. 3,005,600.07

Write the number the name represents:

6. Forty-five thousandths

7. Seventeen and seven hundredths

8. Five million, three hundred thousand, twenty-nine and six tenths

9. Six million and five thousandths

10. Two hundred eight thousand, four

### Order Decimals

Exercises: List each group of numbers in order **from least to greatest**:

1. ) 20, 4, .6, .08

2. ) 246.8, 248.6, 244.9, 246.5

3. ) 1.03, 2.4, .89, .987

4. ) 14.8, 2.68, .879, 8.47

5. ) 5.3, 5.12, 5.38, 5.29

6. ) 54.89, 56.3, 58.1, 52.98

7. ) 4, .006, .8, .07

8. ) 297, 3.456, 64.4, 7.24

9. ) 794, 793.8, 794.65, 794.7

10. ) 9, 6.7, 7.24, 14

11. ) 4.2, 4.19, 4.07, 4.3

12. ) 3.75, 6.7, 3.8, .45

### Add and Subtract Whole Numbers

Solve: No Calculators! Use scratch paper and STAPLE TO THE BACK for credit, if needed. **No work = no credit.**

1.)  $6,496 + 3,288 =$

2.  $54,398 + 64,508 =$

3.)  $3,254 + 4,113 =$

4.)  $754 - 549 =$

5.)  $54,678 + 74,357 =$

6.)  $98,455 - 14,789 =$

7.)  $38,904 - 32,899$

8.)  $908 - 774 =$

## Multiply and Divide Whole Numbers

No Calculators! Use scratch paper and STAPLE TO THE BACK for credit, if needed.

**No work = no credit.**

$24 \div 3 =$

$24 \div 6 =$

$16 \times 15 =$

$20 \div 5 =$

$74 \times 10 =$

$190 \div 19 =$

$32 \div 2 =$

$79 \times 9 =$

$216 \div 12 =$

$444 \times 77 =$

$114 \div 14 =$

$4 \times 58 =$

## Fraction Operations

Hints/Guide: When adding and subtracting fractions, we need to be sure that each fraction has the same denominator, then add or subtract the numerators together.

Exercises: Perform the indicated operation: No Calculators! Use scratch paper and STAPLE TO THE BACK for credit, if needed. **No work = no credit.**

1.  $1/2 + 3/4$

4.  $5/10 + 1/2$

2.  $5/8 + 3/4$

5.  $3/4 - 2/8$

3.  $7/3 + 1/3$

6.  $20/50 - 1/10$

## Add and Subtract Decimals

Hints/Guide: When adding and subtracting decimals, the key is to line up the decimals above each other, add zeros to have all of the numbers have the same place value length, then use the same rules as adding and subtracting whole numbers, with the answer having a decimal point in line with the problem.

Solve: No Calculators! Use scratch paper and STAPLE TO THE BACK for credit, if needed. **No work = no credit.**

1)  $15.7 + 2.34 + 5.06 =$

2)  $64.038 + 164.8 + 15.7 =$

3)  $2.6 + 64.89 + 4.007 =$

4)  $12.9 + 2.008 + 75.9 =$

5)  $87.4 - 56.09 =$

6)  $5.908 - 4.72 =$

7)  $68.9 - 24.74 =$

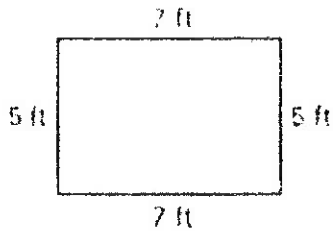
8)  $955.3 - 242.7 =$

## Reading Scales and Finding Area and Perimeter

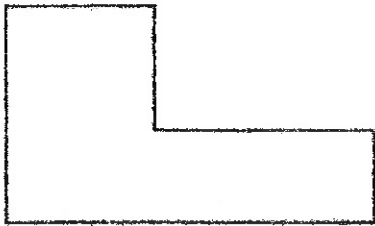
Hints/Guide: To determine the correct answer when reading scales, the important thing to remember is to determine the increments (the amount of each mark) of the given scale.

To find the perimeter of a rectangle or square, we must add the lengths of all of the sides together. To find the area of a square or a rectangle, we must multiply the length by the width.

Exercises: Find the area and perimeter of the following. All units are in feet.



area \_\_\_\_\_ perimeter \_\_\_\_\_



area \_\_\_\_\_ perimeter \_\_\_\_\_

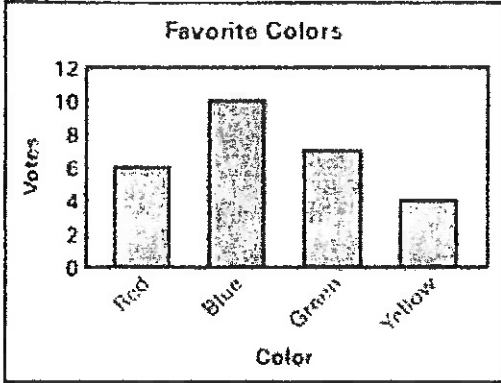


area \_\_\_\_\_ perimeter \_\_\_\_\_



Using data to find answers.

Use the bar graph.

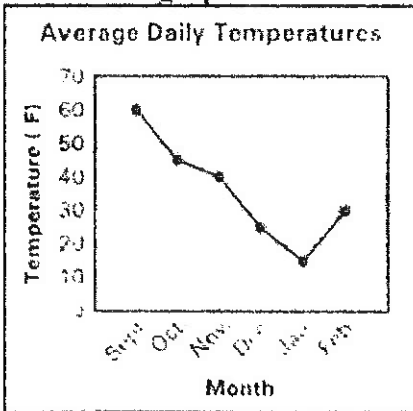


What color did 7 people vote for?

What color had 4 fewer votes than blue?

What was the total number of votes for red and yellow?

Use the line graph.

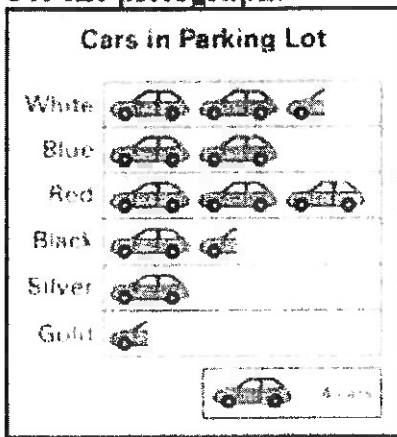


In which month was the average daily temperature the lowest?

What is the difference between the average daily temperatures for November and December?

What was the average daily temperature for October?

Use the pictograph.



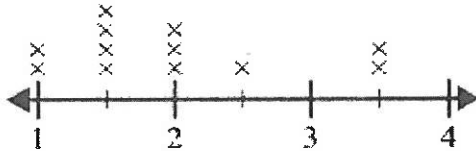
How many black cars were in the parking lot?

How many fewer silver cars were in the parking lot than red cars?

Which color car has twice as many in the parking lot as silver cars?

Use the line plots to answer each question.

- 1) The line plot below shows the sizes of different insects (in inches).



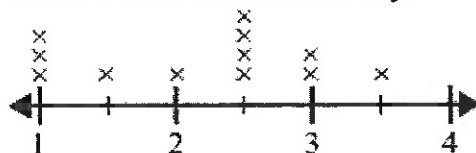
What is the difference in size between the shortest and longest insect?

- 2) The line plot below shows the length (in feet) of the girls' hair in Mr. Wood's class.



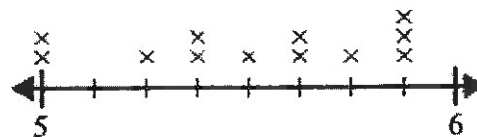
What is the difference in length between the girls with the shortest and longest hair?

- 3) The line plot below shows the distance (in miles) Olivia walked each day.



What is the difference in distance between the fewest miles she walked in a day and most miles she walked in a day?

- 4) The line plot below shows the distance students lived from the school (in miles).



What is the difference in miles between the students who live closest and furthest away?

**Find the Mean/Average, Median, Mode, and Range of a Set of Numbers**

Exercises: No Calculators! Use scratch paper and STAPLE TO THE BACK for credit, if needed. **No work = no credit.**

**Data Set: 5, 12, 6, 3, 8, 16, 8, 6**

Mean:

Median:

Mode:

Range:

**Data Set: 2, 7, 4, 11, 12, 4, 6**

Mean:

Median:

Mode:

Range:

## Factors and Multiples.

Make a factor rainbow for the following. Circle the Greatest Common Factor.

1) 18 and 24

2) 12 and 15

3) 17 and 20

4) 21 and 40

Find the first 10 multiples of the following. Circle the Least Common Multiple.

1) 12 and 4

2) 9 and 8

**Addition**  
 Find the sum of the two numbers in each problem.  
 Show all work.

Example:

$$\begin{array}{r}
 1 \ 1 \\
 4 \ 4 \ 8 \\
 + 1 \ 8 \ 8 \\
 \hline
 6 \ 3 \ 6
 \end{array}$$

1. 
$$\begin{array}{r}
 652 \\
 + 345 \\
 \hline
 \end{array}$$

2. 
$$\begin{array}{r}
 203 \\
 + 525 \\
 \hline
 \end{array}$$

3. 
$$\begin{array}{r}
 726 \\
 + 268 \\
 \hline
 \end{array}$$

**Decimal Addition:**

Remember to line up the decimals before adding. Bring the decimal straight down in your answer.

4. 
$$\begin{array}{r}
 7.75 \\
 + 1.46 \\
 \hline
 \end{array}$$

5.  $51.4 + 2.86$

6.  $.1274 + 8.25$

**Subtraction**  
 Find the difference between the two numbers in each problem. Show all work.

Example:

$$\begin{array}{r}
 3 \ 13 \\
 7 \ 4 \ 8 \\
 - 2 \ 1 \ 8 \\
 \hline
 5 \ 2 \ 5
 \end{array}$$

7. 
$$\begin{array}{r}
 407 \\
 - 198 \\
 \hline
 \end{array}$$

8. 
$$\begin{array}{r}
 7,007 \\
 - 2,426 \\
 \hline
 \end{array}$$

9. 
$$\begin{array}{r}
 3,414 \\
 - 1,218 \\
 \hline
 \end{array}$$

**Decimal Subtraction:**

Remember to line up the decimals before subtracting. Bring the decimal straight down in your answer.

10. 
$$\begin{array}{r}
 338.38 \\
 - 149.27 \\
 \hline
 \end{array}$$

11.  $80.401 - 44.23$

12.  $75.89 - 9.4$

**Multiplication**

Find the product of the two numbers in each problem. Show all work.

Example:

$$\begin{array}{r} 54 \\ \times 16 \\ \hline 324 \\ + 540 \\ \hline 864 \end{array}$$

13.

$$\begin{array}{r} 65 \\ \times 4 \\ \hline \end{array}$$

14.

$$\begin{array}{r} 42 \\ \times 8 \\ \hline \end{array}$$

15.

$$\begin{array}{r} 84 \\ \times 39 \\ \hline \end{array}$$

**Decimal Multiplication:**

Multiply as you would with whole numbers. Count the decimal places in each factor. The product (answer) has the same number of decimal places.

16.

$$\begin{array}{r} .13 \\ \times 70 \\ \hline \end{array}$$

17.

$$\begin{array}{r} 5.1 \\ \times 2 \\ \hline \end{array}$$

18.

$$\begin{array}{r} .108 \\ \times 2.5 \\ \hline \end{array}$$

**Division**

Find the quotient in each problem. If there is a remainder, state the remainders as R=\_\_\_\_. Show all work. Feel free to use a separate sheet of paper.

19.

$$7 \overline{)591}$$

20.

$$12 \overline{)264}$$

21.

$$43 \overline{)2815}$$

### Decimal Division:

If the divisor (outside number) is a decimal, you must move the decimal point (using multiplication) to the right until it becomes a whole number. Then, move the decimal in the dividend (inside number) the same number of times. Divide to find your answer (quotient).

Then, move the decimal straight up from the dividend to the quotient.

Remember, no remainders.

$$\begin{array}{r} \text{quotient} \\ \text{divisor} \overline{) \text{dividend}} \end{array}$$

22.

23.

24.

$$3 \overline{) 31.8}$$

$$.5 \overline{) 7.45}$$

$$.12 \overline{) 12.24}$$

### Rounding

Underline the given place value. Look to the right. If this digit is 5 or greater, increase the underlined digit by 1. If the digit to the right is less than 5, keep the underlined digit the same.

Round to the nearest...

hundredth

0.547      0.55

Round to the nearest....

25. tenth  
0.3479

26. hundredth  
0.7553

27. whole number  
3.268

28. ten  
162.21

29. thousandth  
0.0036

30. hundred  
990.54

Compare the decimals.

Compare using  $<$ ,  $>$ , or  $=$

1.2  $\bigcirc$  1.20      1.2 = 1.20

31. 0.205  $\bigcirc$  0.21

32. 1.03  $\bigcirc$  0.03

33. 0.04  $\bigcirc$  0.050

34. 0.1  $\bigcirc$  0.1000

35. 0.52  $\bigcirc$  0.500

36. 0.41  $\bigcirc$  0.405

**Prime Number:** A whole number greater than 1 that has only two factors, 1 and itself.  
 Examples: 2, 3, 5, 7, 11, 13, 17, and 19 are all prime numbers.

**Composite Number:** A whole number greater than 1 that has more than two factors.  
 Example: 8 is a composite number since its factors are 1, 2, 4, 8.

Determine if the following numbers are prime or composite. If the numbers are composite, please list all of the factors.

37. 27: \_\_\_\_\_

38. 39: \_\_\_\_\_

39. 43: \_\_\_\_\_

40. 49: \_\_\_\_\_

### Exponents

A way to show repeated multiplication by the same factor is to use an exponent. In this example:  $2^3 = 2 \times 2 \times 2 = 8$ . The small raised three is the exponent. It tells how many times the number 2, called the base, is multiplied by itself.

Solve the following expressions by writing the expanded notation (repeated multiplication) and find the value.

41.  $6^2$

42.  $2^6$

43.  $3^4$

44. eight squared

45. five cubed



**Greatest Common Factor**

The greatest factor that two or more numbers have in common (GCF).

1. List all the factors of four in order
2. List all the factors of twenty in order
3. List the common factors
4. Write the greatest common factor

**Finding Common Factors:**

4: 1, 2, 4

20: 1, 2, 4, 5, 10, 20

Common Factors: 1, 2, 4    GCF= 4

List all the factors for each number. Circle the common factors.

46. 18 : \_\_\_\_\_

30 : \_\_\_\_\_

Common Factors: \_\_\_\_\_      Greatest Common Factor: \_\_\_\_\_

47. 60 : \_\_\_\_\_

45 : \_\_\_\_\_

Common Factors: \_\_\_\_\_      Greatest Common Factor: \_\_\_\_\_

48. 23: \_\_\_\_\_

29: \_\_\_\_\_

Common Factors: \_\_\_\_\_      Greatest Common Factor: \_\_\_\_\_

49. 56: \_\_\_\_\_

72: \_\_\_\_\_

Common Factors: \_\_\_\_\_      Greatest Common Factor: \_\_\_\_\_

**Least Common Multiple**

The smallest nonzero multiple that two or more numbers have in common.

1. List the first 6 multiples of 4
2. List the first 6 multiples of 6
3. List the common multiples
4. Write the least common multiple.

**Finding Common Multiples:**

4: 4, 8, 12, 16, 20, 24

6: 6, 12, 18, 24, 30, 36

Least Common Multiple= 12

50. 8 : \_\_\_\_\_

12 : \_\_\_\_\_

Common Multiples: \_\_\_\_\_ Least Common Multiple: \_\_\_\_\_

51. 7 : \_\_\_\_\_

11 : \_\_\_\_\_

Common Multiples: \_\_\_\_\_ Least Common Multiple: \_\_\_\_\_

52. 25 : \_\_\_\_\_

10 : \_\_\_\_\_

Common Multiples: \_\_\_\_\_ Least Common Multiple: \_\_\_\_\_

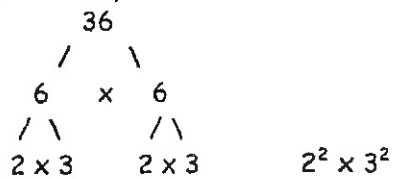
53. 24 : \_\_\_\_\_

36 : \_\_\_\_\_

Common Multiples: \_\_\_\_\_ Least Common Multiple: \_\_\_\_\_

**Prime Factorization** is a composite number renamed as a product of prime numbers. You may make a factor tree to find the answer. Put final answer in exponent form.

Find the prime factorization of 36.



54.

180
-----

55.

525
-----

56.

91
----

57.

48
----

**Comparing Fractions**

Compare each pair of numbers. Write the correct comparison symbol ( $<$ ,  $>$ ,  $=$ ) in each circle. Make sure you have common denominators before comparing numerators.

Example:

$$\begin{array}{ccc} \frac{1}{3} & \bigcirc & \frac{3}{4} \\ \downarrow & & \downarrow \\ \frac{4}{12} & & \frac{9}{12} \end{array}$$

58.

$$\frac{3}{8} \bigcirc \frac{5}{8}$$

59.

$$\frac{3}{4} \bigcirc \frac{3}{8}$$

60.

$$\frac{1}{2} \bigcirc \frac{4}{8}$$

61.

$$\frac{3}{7} \bigcirc \frac{1}{4}$$

62.

$$\frac{3}{5} \bigcirc \frac{5}{6}$$

63.

$$\frac{7}{8} \bigcirc \frac{3}{4}$$

**Ordering Fractions**

Order the following fractions from least to greatest.

64.

$$\frac{3}{8} \quad \frac{5}{8} \quad \frac{4}{8} \quad \frac{2}{8} \quad \frac{7}{8}$$

65.

$$\frac{1}{5} \quad \frac{4}{5} \quad \frac{1}{10} \quad \frac{6}{10} \quad \frac{7}{10}$$

66.

$$\frac{1}{2} \quad \frac{1}{4} \quad \frac{1}{6} \quad \frac{1}{3} \quad \frac{1}{5}$$

67.

$$\frac{1}{2} \quad \frac{5}{16} \quad \frac{30}{64} \quad \frac{3}{8} \quad \frac{9}{32}$$

**Order of Operations**

Solve the following problems. Show your work. Be sure to follow the order of operations.

Parenthesis

Exponents

Multiplication or Division: Which ever comes first from left to right.

Addition or Subtraction: Which ever comes first from left to right.

Example:  $8 - 4 \div 2 + 2 =$   
 $8 - 2 + 2 =$   
 $6 + 2 =$   
 $8$

68.  $15 \times 8 - 3 =$

69.  $36 \div 4 \times 3 =$

70.  $(30 + 8) \times 6 - 1 =$

71.  $(30 + 8) \times (6 - 1) =$

72.  $(29 - 18) + 14 \div 2 + 6 =$

73.  $64 \div 8 \times 2$

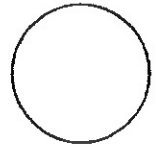
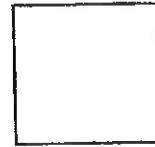
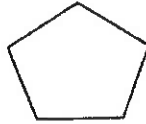
74.  $36 - 5(16 - 11) =$

75.  $25 + 18 \div 6 - 1 =$

76.  $24 + 6^2 - 1^4 =$

**Geometry-Who am I?**

Use the following shapes to answer the questions below.



77. I am a 2 dimensional shape that has four sides. I have four 90 degree angles. I have two sets of parallel lines. I also have two sides that are one length, and my other two sides are a different length.

Who am I? \_\_\_\_\_

78. I am a 2 dimensional shape that has three acute angles. All of my sides are the same length. I have no parallel sides.

Who am I? \_\_\_\_\_

79. I am a 2 dimensional shape that has four sides. I have two obtuse angles and two acute angles. I have two different sets of parallel sides. I also have two sides that are one length, and my other two sides are a different length.

Who am I? \_\_\_\_\_

80. I am a 2 dimensional shape that has 5 obtuse angles. I do not have any sides that are parallel.

Who am I? \_\_\_\_\_

81. I am a 2 dimensional shape that has four 90 degree angles. I have four sides that are all the same length. I have two different sets of parallel lines.

Who am I? \_\_\_\_\_

82. I am a 2 dimensional shape. My perimeter is also known as a circumference.

Who am I? \_\_\_\_\_

**Simply Fractions**

Simplify the following fractions. If the fractions are improper, change them to mixed numbers then simplify.

Example:  $\frac{10}{5} = \frac{2}{1}$   
 $\frac{25}{5} = \frac{5}{1}$

83.

$$\frac{14}{28}$$

84.

$$\frac{15}{55}$$

85.

$$\frac{12}{51}$$

86.

$$\frac{34}{48}$$

87.

$$\frac{17}{4}$$

88.

$$\frac{80}{25}$$

**Adding Fractions and Mixed Numbers**

Add the following fractions. Make sure you have common denominators before adding. Remember, you only add the numerator (top number) and you keep the denominator (bottom number) the same! Simplify your final answers.

Example:

$$\begin{array}{r} \frac{1}{3} + \frac{1}{5} = \\ \downarrow \quad \downarrow \\ \frac{5}{15} + \frac{3}{15} = \frac{8}{15} \end{array}$$

89.

$$\frac{6}{10} + \frac{3}{10} =$$

90.

$$2\frac{3}{8} + 1\frac{2}{8} =$$

91.

$$\frac{1}{9} + \frac{5}{6} =$$

92.

$$\frac{1}{12} + 1\frac{2}{3} =$$

**Subtracting Fractions**

Subtract the following fractions. Make sure you have common denominators before subtracting. Remember, you only subtract the numerator (top number) and you keep the denominator (bottom number) the same! Simplify your final answers.

Example:

$$\frac{5}{6} - \frac{1}{3} =$$

$$\begin{array}{c} \downarrow \quad \downarrow \\ \frac{5}{6} - \frac{2}{6} = \frac{3}{6} = \frac{1}{2} \end{array}$$

93.

$$\frac{5}{6} - \frac{3}{6} =$$

94.

$$2\frac{8}{12} - 1\frac{3}{12} =$$

95.

$$\frac{7}{10} - \frac{2}{4} =$$

96.

$$3\frac{4}{5} - \frac{1}{4} =$$

**Multiplying Fractions**

Multiply the following fractions. Multiply the numerators; then multiply the denominators. Simplify, if necessary.

Example:

$$\frac{3}{5} \times \frac{5}{9} = \frac{15}{45} = \frac{1}{3}$$

97.

$$\frac{3}{4} \times \frac{1}{3} =$$

98.

$$\frac{2}{3} \times \frac{5}{8} =$$

99.

$$\frac{1}{3} \times \frac{2}{5} =$$

100.

$$\frac{7}{8} \times 2 =$$