Summer Packet - 5th into 6th grade   Name _____

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

Example:

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

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:

$$\begin{array}{r} \scriptstyle 3\ \ 13 \\ 7\ \not4\ \not3 \\ -\ 2\ 1\ 8 \\ \hline 5\ 2\ 5 \end{array}$$

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.

$$\frac{quotient}{divisor\overline{)dividend}}$$

22.

$3\overline{)31.8}$

23.

$.5\overline{)7.45}$

24.

$.12\overline{)12.24}$

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 ◯ 1.20   1.2 = 1.20

31. 0.205 ◯ 0.21

32. 1.03 ◯ 0.03

33. 0.04 ◯ 0.050

34. 0.1 ◯ 0.1000

35. 0.52 ◯ 0.500

36. 0.41 ◯ 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
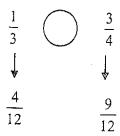3. List the common multiples
4. Write the least common multiple.

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: _____

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:

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

$\downarrow$ $\downarrow$

$\frac{4}{12}$ $\frac{9}{12}$

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