

INCOMING 6TH GRADE SUMMER MATH PACKET CCPSG!



NAME: _____

Welcome to Columbus City Preparatory School For Girls! We are so glad to have you as our student! Enjoy your summer, but do not forget to keep up with your math skills and complete this packet by the FIRST WEEK of school. **You will need to show your work throughout! If no work is shown, then 20% will be taken off of your grade.** We look forward to seeing you strive for excellence, and REACH THE T.O.P. at CCPSG!

***No Calculators are to be used. Look at the examples to guide you in solving each problem that you are given. Looking up a video on youtube to help in your solving of the problems is a great idea!**

Addition

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

Example:

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

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

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

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

Decimal Addition:

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

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

$$5. \quad 51.4 + 2.86$$

$$6. \quad .1274 + 8.25$$

Subtraction

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

Example:

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

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

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

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

Decimal Subtraction:

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

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

$$\begin{array}{r} 11. \quad 80.401 - 44.23 \end{array}$$

$$\begin{array}{r} 12. \quad 75.89 - 9.4 \end{array}$$

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 using <, >, or =

1.2 1.20 1.2 = 1.20

Compare the decimals.

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 multiples of each number until you reach a common multiple in the two numbers.
2. 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 : _____

_Least Common Multiple: _____

51. 7 : _____

11 : _____

_Least Common Multiple: _____

52. 25 : _____

10 : _____

_Least Common Multiple: _____

53. 24 : _____

36 : _____

_Least Common Multiple: _____