

**Summer Assignment for Algebra I, College Preparatory\***

This short packet is designed for you to practice and review necessary skills to enable you to be as successful as possible in Algebra I in September. You are encouraged to work on the following problems with little or no calculator use and to show all necessary work.

**I. Rounding**

- 1.) Round to the nearest tenth:      9.64 \_\_\_\_\_  
2.) Round to the nearest hundredth:      118.383 \_\_\_\_\_  
3.) Round to the nearest tenth:      74.58 \_\_\_\_\_  
4.) Round to the nearest ten:      15 \_\_\_\_\_  
5.) Round to the nearest hundred:      743 \_\_\_\_\_

**II. Order of Operations ( PEMDAS )**

- 6.)  $6 \div 3 + 4 \times 2$  \_\_\_\_\_      7.)  $6 \times 4 + (-6)$  \_\_\_\_\_  
  
8.)  $20 - (2^3 - 7)$  \_\_\_\_\_      9.)  $(5 + 2)^2 - 9 \times 3$  \_\_\_\_\_

10.) 
$$\frac{2^4 + (16 - 3 \times 4)}{(6 + 3^2) \div (7 - 4)}$$
 \_\_\_\_\_

**III. Operations With Integers**

- 11.)  $-9 + 11$  \_\_\_\_\_      12.)  $-12 + (-28)$  \_\_\_\_\_  
  
13.)  $23 + (-14)$  \_\_\_\_\_      14.)  $25 + 39 + 78$  \_\_\_\_\_  
  
15.)  $313 - 189$  \_\_\_\_\_      16.)  $189 - 313$  \_\_\_\_\_  
  
17.)  $1000 - 18$  \_\_\_\_\_      18.)  $18 - 1000$  \_\_\_\_\_

19.) What is the difference between the answers when numbers are switched in a subtraction?

---

20.) Given that  $(19)(76) = 1,444$ , answer each of the following.

a.  $(-19)(76) = \underline{\hspace{2cm}}$

b.  $(19)(-76) = \underline{\hspace{2cm}}$

c.  $(-19)(-76) = \underline{\hspace{2cm}}$

d.  $(-76)(-19) = \underline{\hspace{2cm}}$

21.) Given that  $76 \div 19 = 4$ , answer each of the following.

a.  $(-76) \div (-19) = \underline{\hspace{2cm}}$

b.  $(-76) \div (19) = \underline{\hspace{2cm}}$

c.  $(76) \div (-19) = \underline{\hspace{2cm}}$

d.  $19 \div 76 = \underline{\hspace{2cm}}$

#### IV. Operations with Fractions

22.)  $\frac{3}{4} + \frac{2}{7} = \underline{\hspace{2cm}}$

23.)  $\frac{5}{8} - \frac{1}{6} = \underline{\hspace{2cm}}$

24.)  $\frac{9}{11} - \frac{2}{9} = \underline{\hspace{2cm}}$

25.)  $\frac{2}{3} + \frac{4}{5} = \underline{\hspace{2cm}}$

26.)  $\frac{8}{9} \times \frac{3}{16} = \underline{\hspace{2cm}}$

27.)  $\frac{7}{5} \div \frac{21}{10} = \underline{\hspace{2cm}}$

28.)  $\frac{1}{8} \div \frac{1}{4}$  \_\_\_\_\_

29.)  $\frac{6}{11} \div \frac{3}{22}$  \_\_\_\_\_

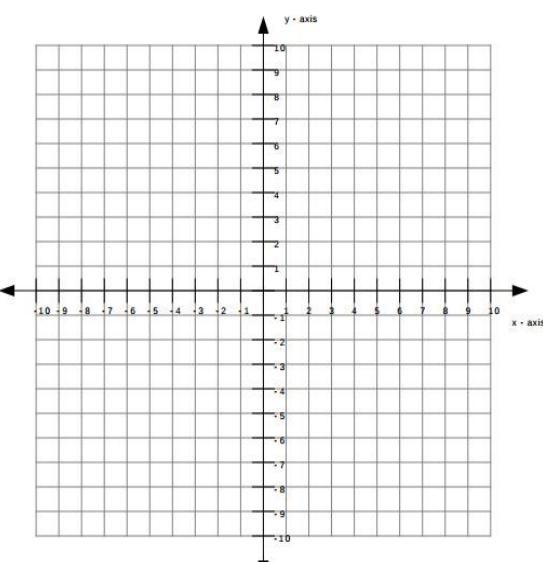
#### V. Percents, Decimals, Fractions (reduce all fractions)

30.) Complete the table by writing each number as a percent, decimal & fraction.

Percent	Decimal	Fraction
25%		
	.65	
62%		
		5/8
	.08	
		4/5
12.5%		
		1/3

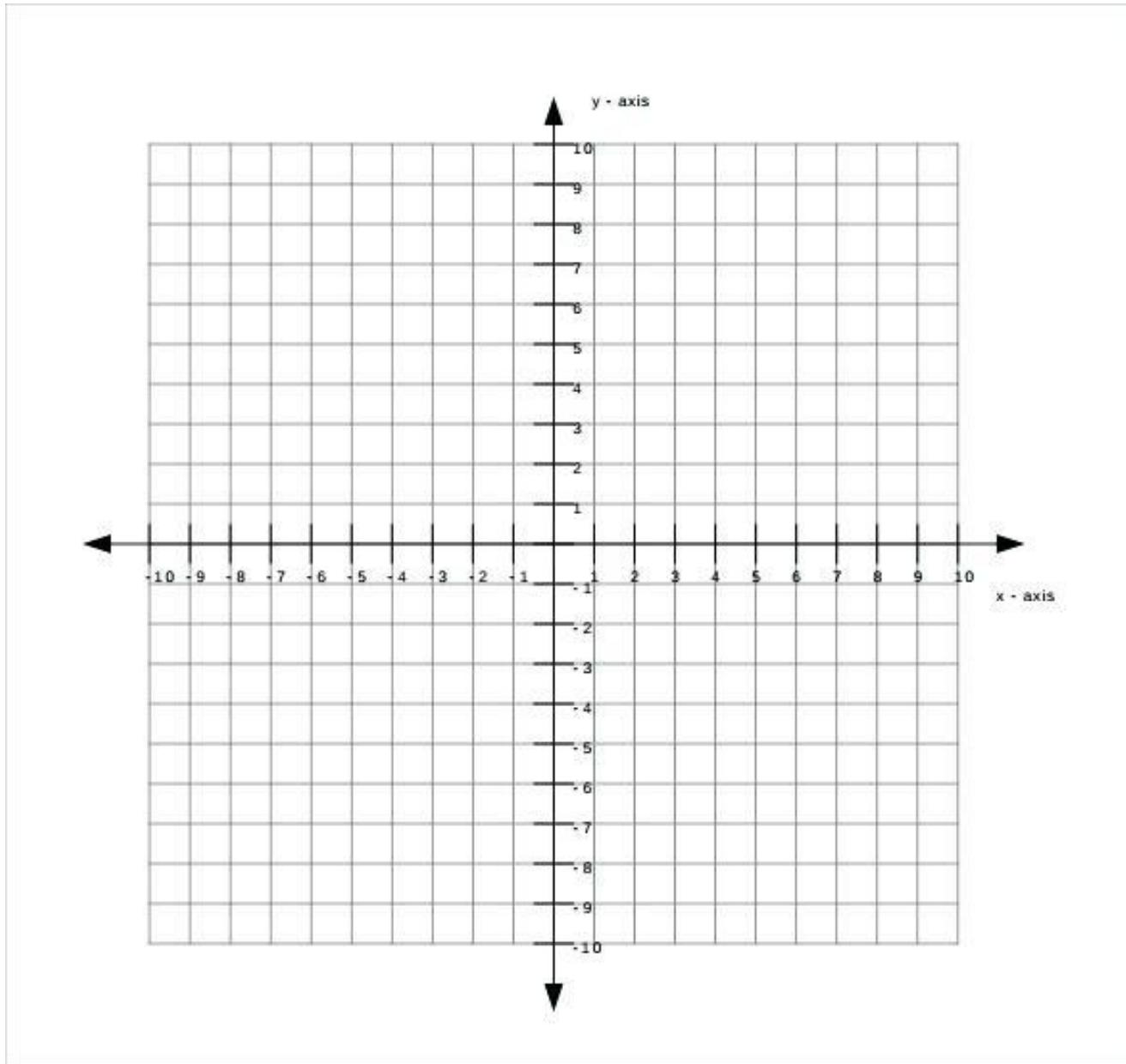
#### VI. Graphing

- 31.) Graph each of the following points on the x – y plane:
- A. (1, 8)    B. (0, 5)    C. (-4, 8)  
 D. (6, -2)    E. (-6, -4)    F. (10, -9)



32.) Using the coordinate plane shown below, write the ordered pair for each point. Explain your process.

- A. ( , )      B. ( , )      C. ( , )      D. ( , )      E. ( , )  
F. ( , )      G. ( , )      H. ( , )      I. ( , )      J. ( , )



VII. Number Order: Place the correct symbol ( $<$ ,  $>$ ,  $=$ ) between each of the following numbers.

33.)  $\frac{7}{10}$      $\frac{3}{10}$

34.)  $\frac{5}{16}$      $\frac{3}{4}$

35.)  $\frac{2}{8}$      $\frac{1}{4}$

36.)  $-\frac{7}{8}$      $-\frac{8}{9}$

37.)  $-\frac{8}{12}$      $-\frac{4}{6}$

38.)  $|-3|$      $|3|$

39.) 0.437    0.435    40.) -13    -32    41.) -0.57    -0.570

VIII. Evaluate the following expressions when  $x = 4$ ,  $y = -2$ , and  $z = 5$ .

42.)  $3x - y =$  \_\_\_\_\_    43.)  $x - 2y + 3z =$  \_\_\_\_\_    44.)  $\frac{x}{2} + y^2$  \_\_\_\_\_

45.) 
$$\frac{x+y}{-3}$$
 \_\_\_\_\_    46.)  $|xy|$  \_\_\_\_\_    47.)  $y^2$  \_\_\_\_\_

48.)  $-y^2$  \_\_\_\_\_    49.)  $|2x| + |3y| - (-z)$  \_\_\_\_\_

IX. Use the variable  $x$  and translate each statement into an algebraic expression.

50.) A number increased by four. \_\_\_\_\_

51.) Four less than a number. \_\_\_\_\_

52.) Four more than a number divided by seven. \_\_\_\_\_

53.) Four more than seven times a number. \_\_\_\_\_

54.) The difference between two times a number and ten . \_\_\_\_\_

55.) The difference between ten and two times a number. \_\_\_\_\_

56.) The quotient of a number and four. \_\_\_\_\_

57.) The quotient of four and a number. \_\_\_\_\_

58.) The square of the sum of a number and six. \_\_\_\_\_

**X. Use the Distributive Property to Simplify the Following.**

59.  $5(2x - 3) =$  \_\_\_\_\_

60.)  $-3(x - 4) =$  \_\_\_\_\_

61.)  $8 - (x + 5) =$  \_\_\_\_\_

62.)  $2(x + 5) + 3(x + 6) =$  \_\_\_\_\_

63.)  $\left(\frac{1}{3}\right)(6x - 9y + 12) =$  \_\_\_\_\_

64.)  $2x - 5(x - 3y) =$  \_\_\_\_\_

\*Portions of the above were used from the following websites:

[https://www.solebury.org/uploaded/Academics/2018-2019/Algebra\\_I\\_Summer\\_Assignment.pdf](https://www.solebury.org/uploaded/Academics/2018-2019/Algebra_I_Summer_Assignment.pdf)

<https://drive.google.com/file/d/15XX-cHsbrd5Lmmo8fc0VcHGzlhk1u9PE/view>