

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. $(-19)(76) =$ _____

b. $(19)(-76) =$ _____

c. $(-19)(-76) =$ _____

d. $(-76)(-19) =$ _____

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

a. $(-76) \div (-19) =$ _____

b. $(-76) \div (19) =$ _____

c. $(76) \div (-19) =$ _____

d. $19 \div 76 =$ _____

IV. Operations with Fractions

22.) $\frac{3}{4} + \frac{2}{7} =$ _____

23.) $\frac{5}{8} - \frac{1}{6} =$ _____

24.) $\frac{9}{11} - \frac{2}{9} =$ _____

25.) $\frac{2}{3} + \frac{4}{5} =$ _____

26.) $\frac{8}{9} \times \frac{3}{16} =$ _____

27.) $\frac{7}{5} \div \frac{21}{10} =$ _____

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.

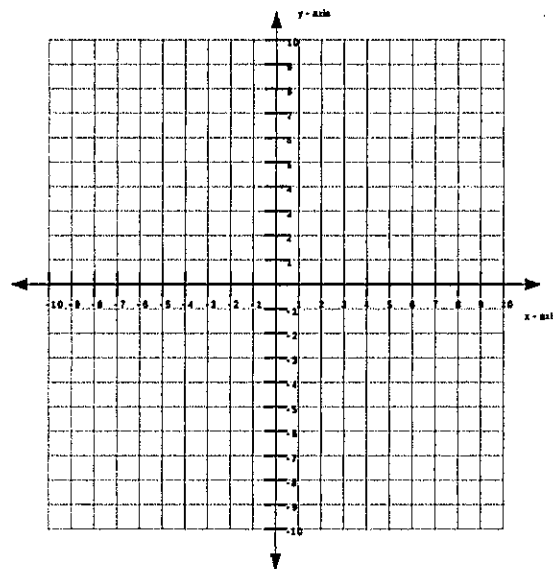
Percent	Decimal	Fraction
25%		
	.65	
62%		
		5/8
	.08	
		4/5
12.5%		
		1/3

VI. Graphing

31.) Graph each of the following points on the x - y plane:

A. (1, 8) B. (0, 5) C. (-4, 8)

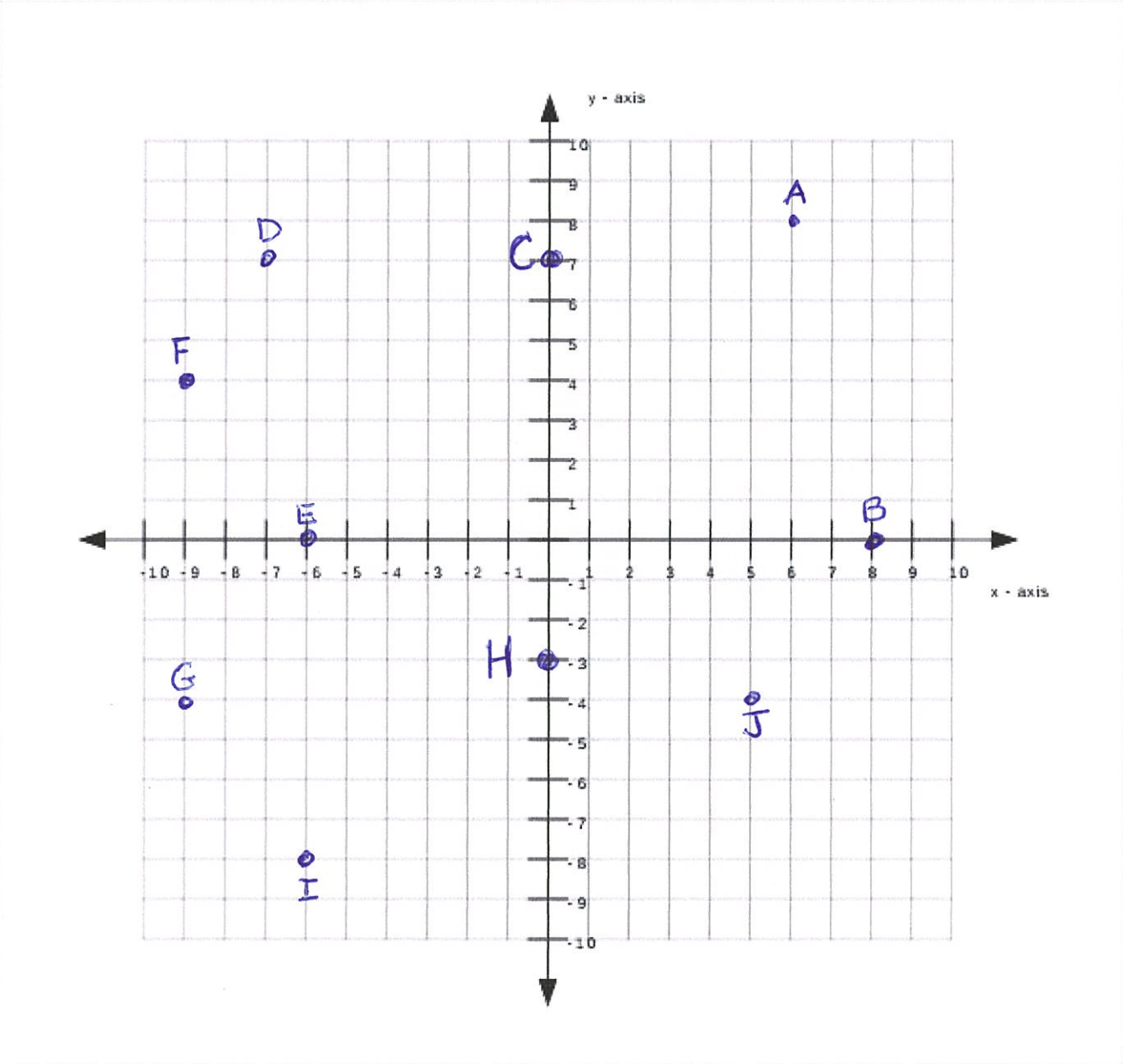
D. (6, -2) E. (-6, -4) F. (10, -9)



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