

ALGEBRA I (HONORS)

SUMMER ASSIGNMENT

NAME: _____

HOUR: _____

DATE: _____

CONGRATULATIONS!

You are beginning your high school career. I am so proud of you for stepping up to the challenge of taking an honors course. By doing this, I already know that you are self-motivated, hard-working, and dedicated to doing your best. I'm excited to have you in my class next year. Over the summer months, work on this assignment to stay refreshed with the basic mathematical concepts we will start with in August. I expect you to have this assignment complete on the first day of school to turn in for your first grade. I look forward to seeing you in August.

Problems will cover the following topics:

- Order of Operations • Integers • Fractions • Percents •
- Writing Math Expressions from Words •
- Simplifying Expressions • Solving equations • Radicals •
- Proportions • Inequalities • Coordinate System •

DIRECTIONS:

Work each problem by hand next to each problem. You will only receive credit for the problems that have work shown. Choose the best answer to write **DIRECTLY LEFT OF THE QUESTION #**.

A. Evaluate the following expressions.

1. $(-8)^2 \div (-2)$

- a) -32 b) 32 c) -8 d) 8

2. $-8 + 4w + 3 + w$

- a) $-5+5w$ b) $11+5w$ c) $3w-5$ d) $-5+4w+w$

3. $(-3)^2 + (-4)(-9)$

- a) 45 b) 42 c) 27 d) -42

4. $-3(7 + w) - 5w$

- a) $-21-8w$ b) $-21-2w$ c) $-10-8w$ d) $-21+2w$

5. $-(-6 - 5x)$

- a) $6+5x$ b) $11x$ c) $-11x$ d) $-6+5x$

6. $|4.3 + (-7.2)|$

- a) -2.9 b) 2.9 c) 30.96 d) -30.96

7. $12 \div (-4) - 5 \div (-10)$

- a) -2.5 b) -3.5 c) 3.5 d) -5

8. $19 + [(8 + 3) - 9 \div 3]$

- a) 43 b) 19.6 c) 61 d) 176

9. $(4^2 - 2^3)(1^3 - 3^2)$

- a) -6 b) 64 c) -64 d) -10

10. $\sqrt{9} + \sqrt{4}$

- a) 5 b) 13 c) $\sqrt{13}$ d) 36

11. $\sqrt{49} - \sqrt{25}$

- a) $\sqrt{24}$ b) 2 c) 24 d) 12

12. $\frac{\sqrt{36}}{\sqrt{4}}$

a) 9

b) 3

c) $\frac{13}{2}$

d) 4

B. Evaluate the following expressions by plugging in the given value for the variable.

13. $|6 - 2m|$ for $m = 7$

a) -8

b) 8

c) 28

d) 20

14. $-2(2s - 3t)$ for $s = -5.2$ and $t = 1.9$

a) -9.4

b) 32.2

c) -32.2

d) -38.8

15. $\frac{a}{b}$ for $a = \frac{2}{3}$ and $b = -\frac{5}{6}$

a) $\frac{15}{12}$

b) $\frac{10}{18}$

c) $-\frac{12}{15}$

d) $-\frac{10}{18}$

C. Write an expression from the following phrases.

16. One more than the quotient of x and 2.

a) $2x$

b) $2x + 1$

c) $\frac{2}{x} + 1$

d) $\frac{x}{2} + 1$

17. Three times the square of a number.

a) $2x^3$

b) $3 + x^2$

c) $3x^2$

d) $3(2x)$

18. Ten more than the product of y and z .

a) $10xz$

b) $xz - 10$

c) $10 + xz$

d) $10 - xz$

D. Write an expression for the following situations and then choose the best answer.

19. On a diving exercise, a submarine rose 20 ft, dove 40 ft, rose 7 ft, and rose 13 ft. What was the change in depth after the exercise?

a) 13 ft

b) 20 ft

c) 40 ft

d) No change

20. At 9:00 am, the temperature was -7°F . By noon, the temperature was 19°F . What was the change in temperature?

a) 12

b) -12

c) 26

d) 19

E. Simplify the following expressions.

21. $4b + 7 - 5b - 19$

a) $9b - 12$

b) $-1b - 12$

c) $-1b + 12$

d) $-1b + 26$

22. $7x + 4 + 3x + 3$

a) $10x + 7$

b) $11x + 9$

c) $10x + 9$

d) $-10x - 7$

23. $5(3x - 2y) + 2(x + 2y)$

a) $17x - 2y$

b) $17x + 14$

c) $17y$

d) $17x - 6y$

F. Solve the following proportions for the variable.

24. $\frac{3}{z} = \frac{1}{8}$

a) 24

b) 32

c) 11

d) 5

25. $\frac{-4}{9} = \frac{7}{x}$

a) 5.14

b) -4

c) 15.75

d) -15.75

26. $\frac{f+3}{12} = \frac{7}{2}$

a) 43.5

b) 45

c) 39

d) 40.5

G. Solve the following equations for the variable (1 step & 2 step equations).

27. $-14 = x - 8$

a) 22

b) -6

c) 6

d) -22

28. $x + 22 = 18$

a) -4

b) 40

c) 4

d) -40

29. $x - 32 = -25$

a) 57

b) -57

c) 7

d) -7

30. $-7x - 19 = 23$

a) 6

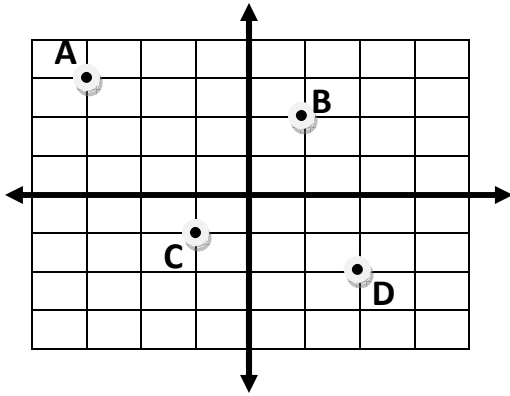
b) -6

c) 35

d) 49

I. Coordinate Plane.

40. Name the coordinates for the points A, B, C, and D on the graph below. (each interval = 1 unit)



- a) $A(3,3)$ $B(2,1)$ $C(1,-1)$ $D(-2, 2)$
- b) $A(-3,3)$ $B(1,2)$ $C(-1,-1)$ $D(2,-2)$
- c) $A(3,-3)$ $B(-2,1)$ $C(-1,1)$ $D(-2,-2)$
- d) $A(3,3)$ $B(2,1)$ $C(1,1)$ $D(2,2)$