

Name \_\_\_\_\_

Date \_\_\_\_\_

HONORS ALGEBRA 1

I want my students to be able to come into my class....

**Simplify each expression using the order of operations. Show all work.**

1.  $2 \bullet -3^2 + 4$  \_\_\_\_\_

2.  $2(2 + 12 \div 4)$  \_\_\_\_\_

3.  $\frac{5 + 10 \div 2 - 2}{2(3^2 - 9)}$  \_\_\_\_\_  
\_\_\_\_\_

4.  $20 - \frac{1}{2} \bullet 8^2$

5.  $\frac{3}{4}[13 - (2 + 3)]^2$  \_\_\_\_\_  
\_\_\_\_\_

6.  $\frac{12 \bullet 1 - 13 + 1}{3 - 7} \div \frac{-5}{2}$

**Evaluate the expression if a = 2, b = -3, c = 4 and d = -1. Show all work.****Hint: Use parentheses when substituting.**

7.  $-2a + 4b - d$  \_\_\_\_\_

8.  $3ab - 5cd^2 + 10$  \_\_\_\_\_

9.  $-15 - b + ac \div \frac{d - 1^2}{\sqrt{c}}$  \_\_\_\_\_

10.  $\frac{-3ac}{2} \bullet \frac{\sqrt{9} \bullet d}{bd - d}$  \_\_\_\_\_

**Simplify by combining like terms, distributing or both. Show all work.**

11.  $2x + 3x - x$  \_\_\_\_\_

12.  $-2(x - 3)$  \_\_\_\_\_

13.  $-5x - 4x - 9x$  \_\_\_\_\_

14.  $2(3x + 4) - 5x$  \_\_\_\_\_

15.  $-(3x - 2) + 4 - 2(-2x + 3)$  \_\_\_\_\_

16.  $2x + 4(3x - 8) - 4$  \_\_\_\_\_

17.  $4 + 2(-x + 2) + 2x - 3$  \_\_\_\_\_

18.  $-3(7x - 2) + 8(-2x + 1)$  \_\_\_\_\_

**Solve each equation. Show all work.**

19.  $x - 3 = -8$  \_\_\_\_\_

20.  $10 = x + 5 - 2x$  \_\_\_\_\_

21.  $-x - 1 = -1(-x - 3)$  \_\_\_\_\_

22.  $2x = 8 + 2$  \_\_\_\_\_

23.  $\frac{1}{2}x = -7$  \_\_\_\_\_

24.  $-12 = -6x + 2(x - 4)$  \_\_\_\_\_

**Graph and LABEL the following points on the coordinate plane.**

25. **A** (2, -5)

26. **B** (0, 3)

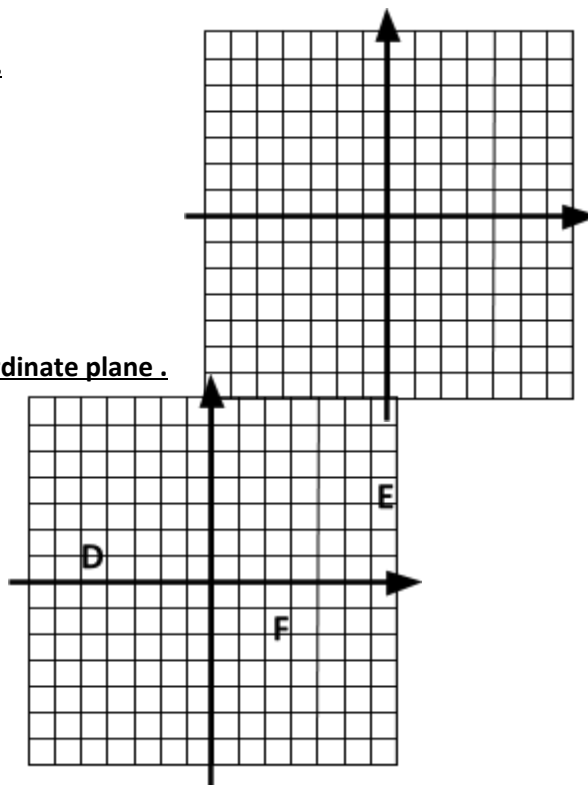
27. **C** (-4, 4)

**Use an ordered pair to write the location of each point on coordinate plane .**

28. **D** \_\_\_\_\_

29. **E** \_\_\_\_\_

30. **F** \_\_\_\_\_



**Reduce each fraction.**

31.  $\frac{4}{18}$  \_\_\_\_\_

32.  $\frac{-3}{-9}$  \_\_\_\_\_

33.  $-\frac{15}{12}$  \_\_\_\_\_

34.

$-\frac{20}{5}$  \_\_\_\_\_

**Simplify.**

35.  $\frac{2}{3} + \frac{4}{3}$  \_\_\_\_\_

36.  $\frac{1}{4} + \frac{3}{8}$  \_\_\_\_\_

37.  $\frac{5}{6} - \frac{1}{3}$  \_\_\_\_\_

38.  $\frac{1}{3} \cdot 18$  \_\_\_\_\_

39.  $-\frac{3}{4} \div 12$  \_\_\_\_\_

40.  $\frac{5}{8} \cdot \frac{2}{15}$  \_\_\_\_\_

**Find the slope given two points:**

41. (1,2) (9,6) \_\_\_\_\_

42. (-3, -1) (-2, -3) \_\_\_\_\_

43. Two sides of a triangle measure 8 in and 10 in. If the perimeter of the triangle is 22 inches, find the third side of the triangle.

44. The perimeter of an equilateral triangle is 45 inches. What is the length of one side?

45. The side of a square is 5 inches. What is the area of the square?