

# GOOD COUNSEL MATH DEPARTMENT

Summer Math Packet for Students entering

## Algebra I Algebra I with Analysis

The problems in this packet are meant to help you review material that you have learned in previous math courses and will need to understand in order to be successful in Algebra. Try to complete all problems without a calculator. Show all of your work on a separate sheet of paper. ALL work should be completed to the best of your ability. **You will be tested on the material during the first two weeks of school.**

Have a great summer. We are looking forward to seeing you this fall.

Student Name \_\_\_\_\_

Previous Course Taken \_\_\_\_\_



Use order of operations to determine each answer:

1)  $3 + 8 \cdot 2 \div 4 =$  \_\_\_\_\_

2)  $2(4 - 1) - 3 \cdot 5 =$  \_\_\_\_\_

3)  $-2(3^2 + (4 - 6)^2) =$  \_\_\_\_\_

Determine the answer for each problem. Simplify when possible:

4)  $46 - 29 =$  \_\_\_\_\_

5)  $-31 - 6 =$  \_\_\_\_\_

6)  $18 - 90 =$  \_\_\_\_\_

7)  $-2 - (-5) =$  \_\_\_\_\_

8)  $-3 \cdot (-2 \cdot 7) =$  \_\_\_\_\_

9)  $-366 \div -2 =$  \_\_\_\_\_

10)  $-2(x + 1) =$  \_\_\_\_\_

11)  $2x + 10 - 6x - 4 =$  \_\_\_\_\_

12)  $3(2x + 1) - (x - 5) =$  \_\_\_\_\_

13)  $5\frac{1}{3} + 1\frac{1}{3} =$  \_\_\_\_\_

14)  $\frac{2}{3} + \frac{5}{9} - \frac{1}{6} =$  \_\_\_\_\_

15)  $\frac{2}{3}(3x + 9) =$  \_\_\_\_\_

16)  $\frac{1}{4} \cdot \frac{2}{3} \cdot \frac{1}{2} =$  \_\_\_\_\_

17)  $8 - 2\frac{1}{4} =$  \_\_\_\_\_

18)  $\frac{6}{5} \div 2 =$  \_\_\_\_\_

19)  $-\frac{3}{4} \div \frac{3}{10} =$  \_\_\_\_\_

20)  $\frac{\frac{1}{9}}{\frac{2}{3}} =$  \_\_\_\_\_

Solve each equation. Show all steps. Check your answer.

21)  $x + 21 = 80$

22)  $65 - x = 51$



23)  $x - 6 = 20 + 8$

24)  $20x = -240$

25)  $5x - 1 = 34$

26)  $8 = \frac{x}{4}$

27)  $\frac{x}{9} = \frac{21}{27}$

28)  $5x = 2 + 3x$

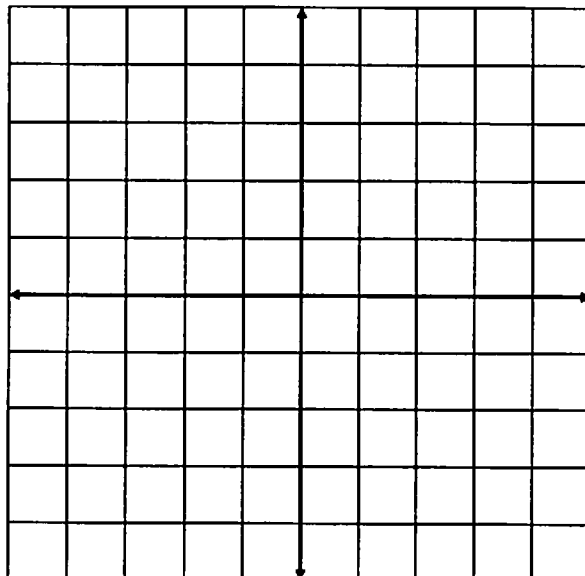
Plot each of the following points on the grid below.

29) A (-3, 0)

B. (2, -1)

C. (3, 4)

D. (-4, -2)





Evaluate each expression given that  $x = 4$ .

30)  $2x =$  \_\_\_\_\_

31)  $-4x =$  \_\_\_\_\_

32)  $x - 10 =$  \_\_\_\_\_

33)  $x^2 =$  \_\_\_\_\_

34)  $3x - 1 =$  \_\_\_\_\_

35)  $-x =$  \_\_\_\_\_

For each of the following, write an equation to represent the situation. Then solve the equation.

36) Eight plus a number is nine.

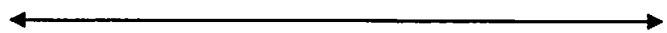
37) Four less than a number is ten.

38) Twice a number plus six is eighteen.

39) One half the quantity of a number and two is one.

Solve each inequality and graph on the number line.

40)  $x + 1 < 5$



41)  $3 - x \geq 6$



42)  $\frac{1}{2}x > 2$

