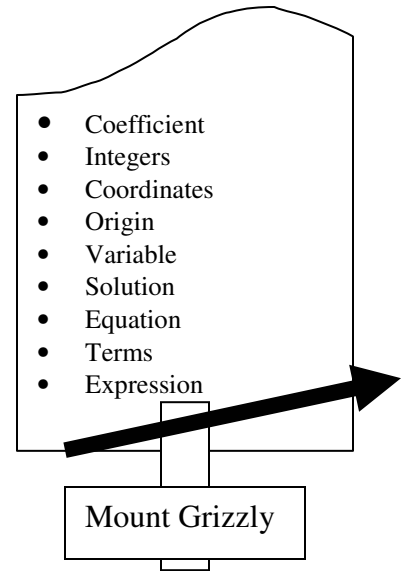


**Grade 8 Summer Assignment**

**Choose a matching term from the sign.**

1. \_\_\_\_\_ A number that replaces the variable in an equation to make the equation true.
2. \_\_\_\_\_ The point where the x-axis and the y-axis intersect on a grid.
3. \_\_\_\_\_ A sentence that uses mathematical symbols instead of words.
4. \_\_\_\_\_ The number that comes in front of a variable.
5. \_\_\_\_\_ The variables and numbers in a mathematical expression.
6. \_\_\_\_\_ A letter used to represent a number in a mathematical expression.
7. \_\_\_\_\_ Positive numbers (1, 2, 3...), negative numbers (-1, -2, -3...), and zero.



**Write the absolute value.**

8.  $|-7| =$
9.  $|34| =$

**Write the integers in order from least to greatest.**

10. 7, -9, 8, 0, 9, -3
11. 20, -10, -5, 5, 10, -20

**Add, subtract, multiply, or divide the integers to find the answer.**

12.  $-22 + -1 =$  \_\_\_\_\_
13.  $(-6)(-4) =$  \_\_\_\_\_
14.  $-300 \div 60 =$  \_\_\_\_\_
15.  $(-3 \cdot 2) \div -6 =$  \_\_\_\_\_

**How many terms in the expression:**

16.  $4p + 9 + p - x + 35x$

**What is the coefficient of x?**

17.  $-7x + q - 13y$

**Simplify the expressions.**

18.  $2(k + 9) + k$

19.  $4z + 6x - 7z$

20.  $12y - 3y + q$

**Circle the correct equation to match the statement or problem.**

21. Toni had 14 fewer bites than Yolanda.

a.  $t - y = 14$

b.  $14t = y$

c.  $t = y - 14$

22. Sam had 12 more than 3 times as many pencils as Carolyn did.

a.  $s = c - 12 \times 3$

b.  $s = 3c + 12$

c.  $c = 2s$

**Solve each equation.**

23.  $x - 37 = 21$

24.  $25g = 225$

**Tell whether the sentence is True or False:**

25.  $5^3 + 5^3 = 5^6$  \_\_\_\_\_

26.  $2(5 - 6) = -2(6 - 5)$  \_\_\_\_\_

27.  $3^2 + 4^2 = 5^2$  \_\_\_\_\_

28.  $3 + (4 - 2) \div 5 = (3 + 4) - 2 \div 5$  \_\_\_\_\_

**Solve these equations.**

29.  $100 = -4n$   
 $n = \underline{\hspace{2cm}}$

30.  $\frac{s}{8} = 16$   
 $s = \underline{\hspace{2cm}}$

31.  $p - 26 = -39$   
 $p = \underline{\hspace{2cm}}$

Which inequality matches this graph? Circle one.



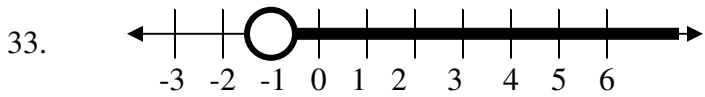
a.  $<3$

b.  $\leq 3$

c.  $>3$

d.  $\geq 3$

Write the inequality shown by the graph.

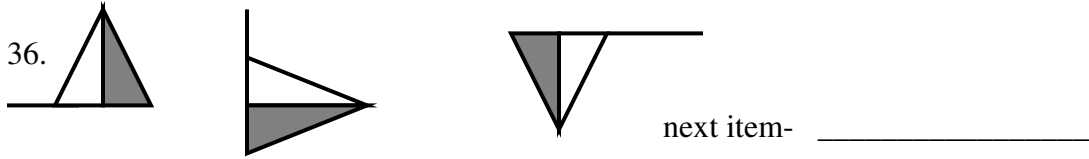


\_\_\_\_\_

34. Is  $(-3, 8)$  a solution to the equation  $x - y = -5$ ?

35. Is  $(-3, 9)$  a solution to the equation  $2x + y = 3$ ?

Finish the pattern. Draw the next item in the sequence.



**Simplify.**

37.  $10^8 \cdot 10^4$

38.  $x^4 \cdot x^3$

30.  $\frac{x^9}{x^3}$

**Write in scientific notation.**

40. 7,850,000

41. 0.000138

**Write in standard notation.**

42.  $2.45 \times 10^5$

43.  $3.78 \times 10^{-3}$

**Simplify. Express in simplest form. Show your work; no calculators allowed.**

44.  $2\frac{3}{8} - 1\frac{5}{8}$

45.  $(4.23)(-2.75)$

**Solve.**

46. A candy store had  $9\frac{1}{8}$  pounds of fancy chocolate. They sold  $2\frac{1}{2}$  pounds to a customer. How many pounds (lbs.) of chocolate were left?

**Express each ratio as a unit rate.**

47. Traveling 260 miles in 4 hours. How many miles in 1 hour?

48. Reading 54 pages in 30 minutes. How many pages per minute?

How many pages per hour?

**Solve each proportion.**

49.  $\frac{x}{9} = \frac{20}{45}$

50.  $\frac{14}{3} = \frac{42}{n}$

**Write a proportion and solve.**

51. 18 donuts in 3 boxes; 30 donuts in  $b$  boxes. Find  $b$ .

**Solve.**

52. What is 56% of 125?

53. 18 is what percent of 75?

54. 14 is 40% of what number?

55. At a bake sale, 275 cookies were for sale. 80% of those cookies were sold by the end of the sale. How many cookies were sold? How many cookies were left over? Explain how you got your answers.