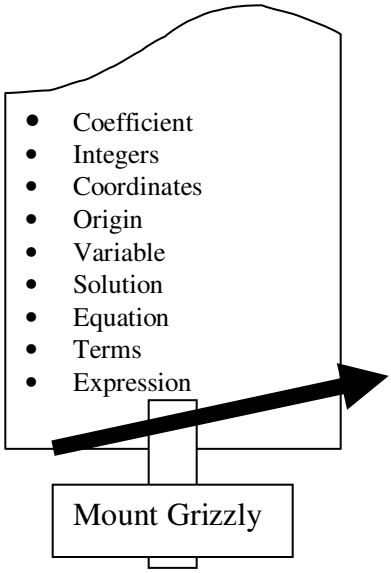
Grade 8 Summer Assignment

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. $-6 \times -4 =$ _____
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. $g + (-25) = 225$

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 = _____

30. $\frac{s}{8} = 16$
s = _____

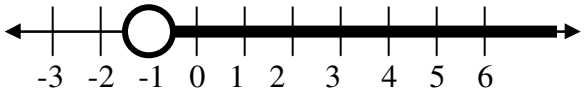
31. p – 26 = -39
p = _____

Which inequality matches this graph? Circle one.

32. 

a. <3 b. ≤ 3 c. >3 d. ≥ 3

Write the inequality shown by the graph.

33. 

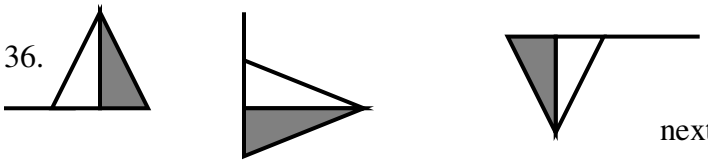
_____

Solve.

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. ☺

36. 

next item- _____

Simplify.

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

38. x^{-4}

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

Write in scientific notation.

40. 7,850,000

41. 0.000138

Write in standard notation.

42. 2.45×10^5

43. 3.78×10^{-3}

Solve. Express in simplest form.

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

45. (4.23)(-2.75)

Solve.

46. A candy store had 9 1/8 pounds of fancy chocolate. They sold 2 ½ 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 per 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?

Calculate the following square roots.

56. $\sqrt{16}$

57. $\sqrt{144}$

58. $\sqrt{48}$ is between what two integers?