Algebra I Summer Assignment

Science Academy Magnet

This summer assignment is all review of material that you should have learned in 6th Grade. Some of the material may be from the beginning of the year. All of this material is foundational for Algebra I, so spend the last two weeks of summer using your independent research skills to refresh your memory on these subjects. Spend the first day budgeting your time for the two weeks.

Make sure to show your work clearly. Use extra paper if you need to.

When you return, you should have the entire packet completed (You may need to include extra paper to show some of your work). In addition, I would like you to rate each section twice on a scale of 1 to 5: first for how well you understood the material before doing the review, second for how well you understood it afterwards. Honesty is more important than ranking everything at a five.

Subject	Before	After	Date(s)
Factoring			
LCM & GCF			
Fractions			
Integer order of operations			
Word Problems			
Fraction operations			
Simplifying expressions			
Evaluating expressions			
Finding Slope from graph			
Finding Slope from points			
Solving Equations			

Name: _____

Parent email: _____

Summer Homework 1 Name_____

Algebra I

Date_____ Period____

Write the prime-power factorization of each.

1) 27

2) 44

3) 40

4) 34

5) 252

6) 264

7) 342

8) 392

Find the GCF of each.

9) 25, 40

10) 32, 48

11) 44, 33

12) 22, 33

13) 80, 16, 72

14) 56, 20, 44

15) 24, 60, 48

16) 65, 78, 39

Find the LCM of each.

17) 9, 6

18) 20, 30

19) 36, 24

20) 32, 40

21) 24, 18, 36

22) 21, 28, 14

23) 14, 12, 16

24) 24, 16, 40

Find each product.

25) $2 \cdot -\frac{4}{3}$

26) $-\frac{1}{7} \cdot \frac{1}{4}$

27) $5\frac{1}{6} \cdot 4\frac{1}{6}$

28) $5\frac{1}{6} \cdot -3\frac{9}{10}$

Find each quotient.

29) $\frac{4}{3} \div 5$

30) $\frac{11}{9} \div \frac{6}{7}$

31) $\frac{2}{5} \div \frac{5}{3}$

32) $\frac{1}{2} \div \frac{3}{10}$

33) $\frac{\frac{1}{3}}{\frac{1}{4}}$

34) $\frac{\frac{13}{10}}{\frac{1}{4}}$

35) $\frac{\frac{3}{2}}{\frac{2}{3}}$

36) $\frac{\frac{7}{5}}{\frac{11}{8}}$

Evaluate each expression.

37) $\frac{(-9) + 3 - 4}{-5}$

38) $\frac{16 - 4}{2 \cdot (-3)}$

39) $\frac{4}{(3 - 2) \cdot 2}$

40) $(2 - 1)^2 \cdot (-3) \cdot (-4)$

41) $((-2) \cdot (-1))^2((-1) - 5)$

42) $\frac{(-3) - 2}{-1}((-5) + 4)$

43) $(-6) - 6 \cdot 5 + (1 - 3) \cdot 5$

44) $\frac{(-8) - (-2) \cdot 2}{-4} - (6 + 2)$

45) $(-5) + 3 - 3 + 5 - (5 + 3)$

46) $(-3) - 5 + (-4) + (-5) - (-6) - 1$

Write an equation to describe the problem, and then solve.

47) Julia had some candy to give to her five children. She first took three pieces for herself and then evenly divided the rest among her children. Each child received four pieces. With how many pieces did she start?

48) The sum of three consecutive numbers is 66. What is the smallest of these numbers?

49) 134 students went on a field trip. Six buses were filled and 8 students traveled in cars. How many students were in each bus?

50) Kathryn had some candy to give to her five children. She first took five pieces for herself and then evenly divided the rest among her children. Each child received three pieces. With how many pieces did she start?

51) Castel spent half of his weekly allowance on clothes. To earn more money his parents let him clean the windows in the house for $6. What is his weekly allowance if he ended with $15?

52) Rob won 67 pieces of gum playing hoops at the county fair. At school he gave two to every student in his math class. He only has 9 remaining. How many students are in his class?

53) Brenda had $21 to spend on five pens. After buying them she had $1. How much did each pen cost?

54) The sum of three consecutive numbers is 84. What is the smallest of these numbers?

55) Jack had some candy to give to his five children. He first took eight pieces for himself and then evenly divided the rest among his children. Each child received three pieces. With how many pieces did he start?

56) Jaidee bought seven posters. A week later half of all her posters were lost during a move. There are now only 13 posters left. With how many did she start?

57) On Tuesday Ashley bought seven boxes. On Wednesday half of all the boxes that she had were destroyed. On Thursday there were only 22 left. How many did she have on Monday?

58) Eugene sold half of his comic books and then bought seven more. He now has 36. With how many did he begin?

Summer Homework 2 Name_____

Algebra 1

Date_____ Period____

Evaluate each expression.

1) $4\frac{1}{3} + \frac{1}{3} - \frac{2}{5}$

2) $(-2) - \left(-\frac{5}{3}\right) - 2\frac{1}{3}$

3) $\frac{3}{4} + 3\frac{3}{8} + \left(-3\frac{1}{6}\right)$

4) $1 - 7 - 3\frac{2}{3}$

5) $\frac{5}{3} - (-1) - \left(-3\frac{1}{2}\right)$

6) $3\frac{1}{2} - 1 + \left(-\frac{3}{4}\right)$

7) $7 + (-1) - \left(-2\frac{4}{7}\right)$

8) $\left(-2\frac{1}{2}\right) - \left(-2\frac{4}{7}\right) - (-3)$

Simplify each expression.

9) $6(m - 9)$

10) $-6(6x - 9)$

11) $-6(9x - 9)$

12) $6(x + 9)$

13) $3p + p$

14) $x + 7 + x - 6$

15) $-9k - 7k$

16) $1 - 5a + 8a$

17) $-9 + 8(1 + 6x)$

18) $7n - 6(4n - 8)$

19) $7(m - 7) + 9$

20) $7 + 7(m + 5)$

21) $2 - 2(8v - 3)$

22) $-7(x - 8) - 6$

23) $8 + 3(10x - 7)$

24) $3(a - 8) - 4$

25) $3(-7m - 7) + 9(1 - 7m)$

26) $-(-5 + 6n) - 7(n - 4)$

27) $6(1 + 9r) + 9(-r + 5)$

28) $3(1 - 8a) + 9(6a + 2)$

29) $6(2 + 10x) + 4(4x + 10)$

30) $-4(-3 - 3x) - 4(-x - 7)$

31) $10(n + 3) + 6(3n - 1)$

32) $3(-3n + 5) - 3(4 + 6n)$

Evaluate each using the values given.

33) $a - (b - (6 - c \div 6(b + b)))$; use $a = 4$, $b = 2$, and $c = -6$

34) $x + 2 - z + 2 + zx - z$; use $x = 5$, and $z = -2$

35) $(zy + 6 + 2 - 5) \div 3$; use $y = -3$, and $z = 6$

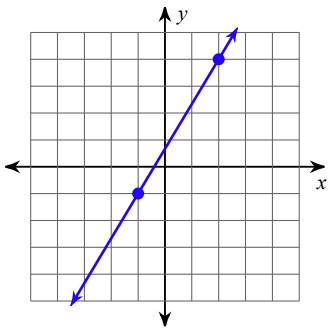
36) $y - y(x + 4) - (z - x)$; use $x = -5$, $y = -4$, and $z = 6$

37) $p \div 4 - m + q \div 2 - (p - 4)$; use $m = -5$, $p = 4$, and $q = 2$

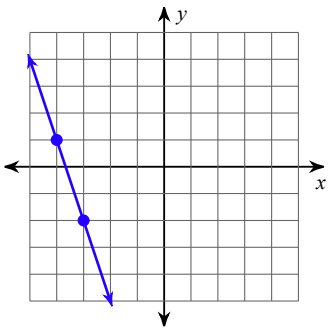
38) $((kj + j - 3)(k + k)) \div 4$; use $j = 5$, and $k = -2$

Find the slope of each line.

39)



40)



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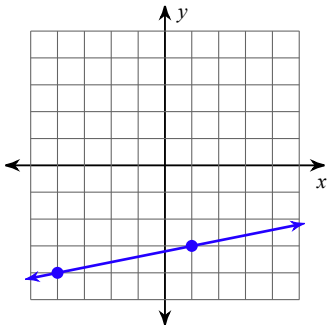

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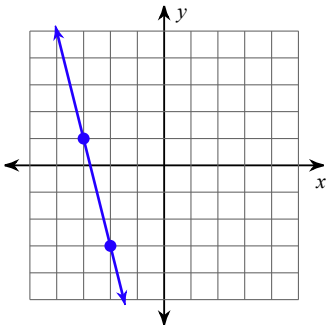

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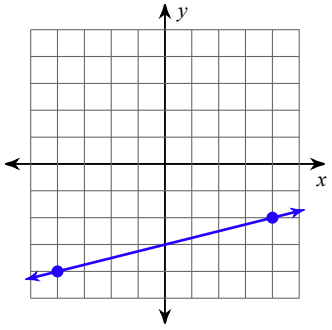

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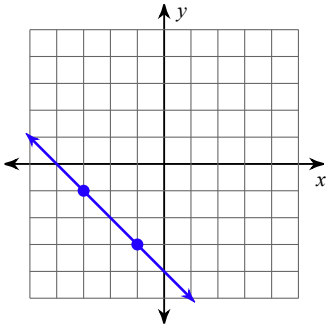

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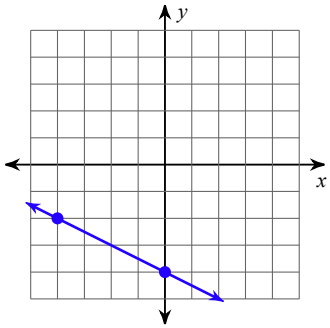

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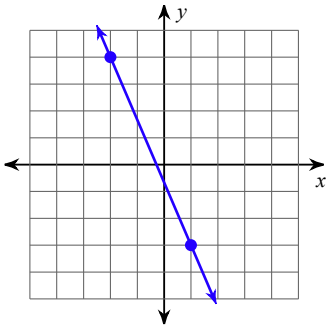

Find the slope of the line through each pair of points.

47) $(-19, -6), (-4, -15)$

48) $(17, -4), (-15, 6)$

49) $(10, -4), (17, 14)$

50) $(-4, -19), (17, 14)$

Solve each equation.

51) $106 = 6 - 5(1 + 7m)$

52) $88 = -8(1 + 4p)$

53) $360 = -8(3 + 8b)$

54) $-5(3n + 7) = -155$

55) $84 = 4(-3r + 6)$

56) $3(5n + 2) = -99$

57) $-23 + 7x = 5 + 3(x - 4)$

58) $2(-8b + 7) = -8b + 6$

59) $5 + 4n = -(n - 5)$

60) $-15 + 6x = -3(-5 + 8x)$

61) $-(8p - 8) = -p - 27$

62) $-8(7n + 3) + 3 = -21 + 6n$

63) $-1 - 3v = 7(v + 7)$

64) $4r + 9 = 1 - 3(r - 5)$