Name: _____ Class: _____ Date: _____ ID: A

Algebra 1B Summer Assignment

Short Answer

1 Mr. Williams had each of his students record the number of hours of sleep they got in one 7-day week. The following table shows the results from four of his students. How much sleep did Julia get each night? Round to the nearest tenth of an hour.

Student	Hours of Sleep
Nina	57.4
Trent	53.2
Julia	58.8
Fumio	62.3

2 A factory can produce 50,000 boxes of cereal a day. Each box contains 15 bowls of cereal, and each bowl contains 180 calories. How many bowls of cereal can the factory produce in a day?

Write a numerical expression for each verbal phrase.

3 the difference of twenty-one and seven

4 the quotient of eight and two

5 fifty-six minus eight

Name the property shown by each statement.

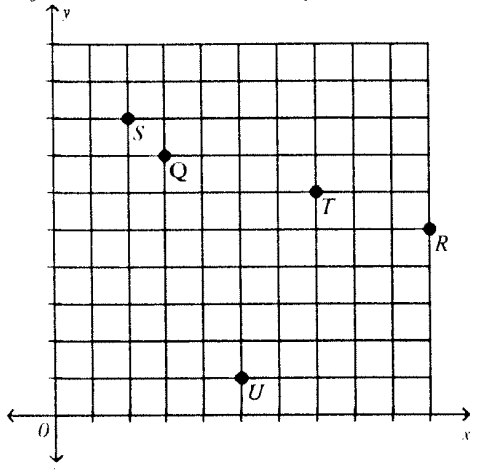
6 $z(10y) = (10y)z$

Simplify each expression.

7 $16 + (x + 4)$

8 $6x + 4(7x + 3)$

Refer to the coordinate system shown below. Write the ordered pair that names each point.



9 *Q*

Use the table below to answer the following questions. The table shows the height and weight of the dogs of nine of Howi's friends.

Dog	Height (in.)	Weight (lb.)
1	15	22
2	28	65
3	8	11
4	20	42
5	35	92
6	24	54
7	11	15
8	32	84
9	16	35

10 Does there appear to be a relationship between the data? Explain. (Hint: you may want to sketch a scatter plot to help see the relationship.)

Find each sum.

11 $34+(-9)$

Find each product.

12 $6\cdot(-21)$

13 $6(7)(-11)$

Find each quotient.

14 $\frac{110}{-5}$

Solve each equation.

15 $-22 = \frac{a}{7}$

Translate each sentence into an equation. Then find each number.

16 The sum of six, and a number divided by two is 0.

17 The table shows the land area in square miles of the three largest states in the USA. Rank the states in order from smallest to largest.

Land Area	
State	**Area (sq mi)**
Texas	2.61797×10^5
California	1.55959×10^5
Alaska	5.71951×10^5

Replace the __ with the symbol that makes a true sentence.

18 $\frac{3}{5}$ __ 0.25

19 $4\frac{3}{5}$ __ 4.75

20 What is the area of a rectangle measuring $\frac{2}{3}$m by $\frac{2}{5}$m?

Find the quotient. Write the answer in simplest form.

21 $\frac{7}{15} \div \frac{3}{11}$

Find the sum or difference. Write the answer in simplest form.

22 $-\frac{8}{15} - \frac{11}{15}$

23 A department store is having a sale on coats. How much would a coat cost if it were $\frac{1}{4}$ off of the original price of $82.00?

Consider the following set of data:
35, 46, 36, 37, 33, 49, 44, 36, 42

24 What is the mean of this data? If necessary, round to the nearest tenth.

25 Winona's bowling scores for the past nine weeks are 195, 180, 195, 212, 208, 231, 179, 246, and 195. Find the mean, median, and mode. Round to the nearest tenth, if necessary.

Express each ratio as a unit rate. Round to the nearest tenth, if necessary.

26 478.6 miles in 5.8 days

Write a proportion that could be used to solve for each variable. Then solve.

27 16 walls in 40 hours
3 walls in h hours

Express the percent as a fraction or mixed number in simplest form.

28 0.5%

Find the percent of each number mentally.

29 $83\frac{1}{3}\%$ of 78

Solve each problem using the percent equation.

30 What is 14% of 84?

31 What is 32.5% of 40?

32

Travelers Seek Theme Parks (in millions)	
Year	**Attendance**
1996	78.7
1998	82.1
2000	84.6
2002	92.4

Source: Travel Industry Association of America

Make a scatter plot and draw a line of fit for the data in the theme park table.

Solve the inequality.

33 $p + 7 < -3$

Solve the inequality. Graph the solution on a number line.

34 $6g < -18$

35 $-12 > -2c$

Display the set of data in a stem-and-leaf plot.

36

Math Test Scores					
55	81	89	93	53	67
84	77	53	57	91	93
71	81	93	63	80	66

Transit of Mercury Across the Face of the Sun
2003–2098 (Duration in Hours)

Stem	Leaf
3	0 7
4	0 4
5	0 2 3 4 4 5
6	2 7 7 7
7	5 5

5|3 = 5.3 hours

37 Find the range for durations of the transits of Mercury across the face of the sun.

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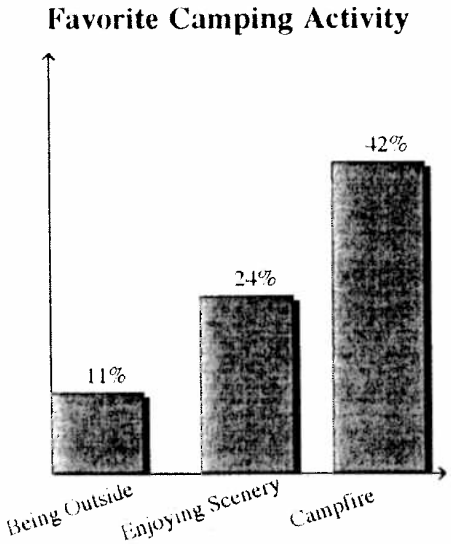
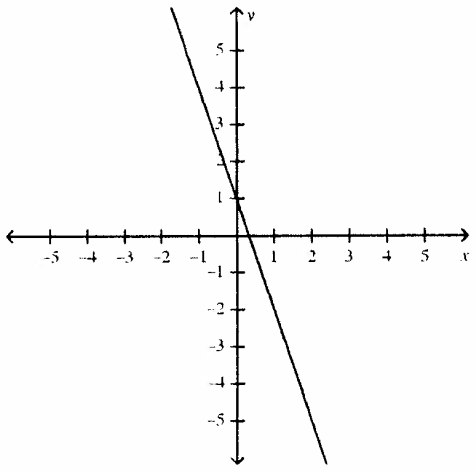


38 Out of 2000 people, how many would you expect have enjoying scenery as their favorite camping activity?

Determine whether the graph, equation, or table represents a linear *or* nonlinear *function.*

39



Write an algebraic expression for each verbal expression.

40 the product of 44 and *a number*

41 29 increased by four times x

Write a verbal expression for the algebraic expression.

42 $12x$

43 $5x^2 + 2$

Evaluate the expression.

44 $72 - 2(8 - 4)$

45 Evaluate the following expression if $a = 10, b = 3$, and $c = 4$.
$3c + bc - 2a$

Find the solution set for the inequality using the given replacement set.

46 $x - 3 < 10; \{11, 12, 13, 14, 15\}$

Simplify the expression. If not possible, write simplified.

47 $3(5a + 3)$

48 $3(8b + 13n - 9n)$

Graph each set of numbers on the number line.

49 $x > -3.8$

Translate the sentence into an equation.

50 Eighty-five minus five times x is equal to ten.

51 Three times the sum of a and b is equal to five times c.

Solve the equation. Then check your solution.

52 $x - 4 = 2$

53 $119 = n - 66$

54 $-\frac{2}{5} + a = \frac{1}{5}$

55 $h - 5.3 = 2.6$

56 $x + 19 = 5$

57 $-22 = -40 + r$

58 $\frac{v}{7} = 3$

59 $\frac{x}{90} = \frac{7}{9}$

60 $5p = 140$

61 $\frac{n}{54} = \frac{4}{9}$

62 $2x + 7 = 79$

Find the solution set for the equation, given the replacement set.

63 $y = 7x + 6$; $\{(5,41),(6,44),(4,39),(7,42)\}$

Find the next three terms of the arithmetic sequence.

64 $55, 47, 39, 31, \ldots$

65 The table below shows the distance traveled by a person driving at the rate of 60 miles per hour.

Hours	1	2	3	4	5
Distance (miles)	60	120	180	240	300

Write an equation to describe the relationship.