

Summer Assignment

Date _____ Period _____

Evaluate each expression.

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

2) $(-8) - 4 - 5 - 2$

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

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

Find each product.

5) $(-8)(-3)(2)(-2)$

6) $(-2)(-8)(-4)(-9)$

7) $\frac{9}{7} \times -\frac{14}{9} \times -\frac{4}{13}$

8) $15 \times -\frac{4}{3} \times -\frac{11}{9}$

Find each quotient.

9) $\frac{90}{9}$

10) $\frac{-70}{10}$

11) $\frac{-\frac{3}{2}}{\frac{13}{8}}$

12) $\frac{1}{-\frac{18}{11}}$

Write the prime-power factorization of each.

13) 44

14) 42

Simplify each.

15) $\frac{36}{126}$

16) $\frac{120}{192}$

17) $\frac{48}{40}$

18) $\frac{84}{60}$

Evaluate each expression.

19) $(-1 - (-4))^2 + (3)(-4)$

20) $((3 - 4)(2^2))(3)$

21) $-2 - -6 - \frac{12}{2 - -4}$

22) $\frac{-18 - (-4 + (3)(2))}{4}$

23) $(-2)^2 + \frac{2}{\left(-\frac{3}{4}\right)\left(\frac{1}{4}\right)}$

24) $\left(\frac{\frac{5}{6} - -\frac{1}{2}}{2}\right)(-1)^2$

Simplify each expression.

25) $x + 5 + x - 5$

26) $6m + 7m$

27) $6(2n - 6)$

28) $-(10 + 6v)$

29) $-5(3 - 4x) - 3x$

30) $9b + 5(3b + 8)$

31) $8(1 - 5n) + 4(1 - 3n)$

32) $-8(2 + 5n) - 4(6 + n)$

Solve each equation.

33) $\frac{n}{17} = -10$

34) $n - 9 = -20$

35) $-\frac{173}{70} = b + \frac{3}{7}$

36) $\frac{64}{15} = \frac{8}{5}x$

37) $\frac{-5 + p}{2} = 4$

38) $\frac{x}{18} + 10 = 11$

39) $-\frac{3}{2} = -7n - \frac{7}{2}$

40) $\frac{7}{5} - \frac{3}{2}b = \frac{103}{20}$

41) $4(6 - 4r) = 152$

42) $2p + 7(1 - 5p) = -224$

43) $-80 = 6(-6 - 7x) + 2(x - 2)$

44) $-46 = 3(n + 6) + 8(-8 + 7n)$

45) $5k - 25 = 8(3k + 4)$

46) $-5 - v = -8(v + 5)$

47) $-8b + 7b = -14 - 3b$

48) $n + 7 = 9 + n$

Simplify. Your answer should contain only positive exponents.

49) $2r^2 \cdot 4r^3$

50) $x^4 \cdot 7x^3$

51) $2^4 \cdot 2^3$

52) $4 \cdot 4^4$

53) $\frac{5^2}{5^4}$

54) $\frac{4^2}{4^4}$

55) $\frac{7p^4}{7p^3}$

56) $\frac{3k}{4k}$

57) $(8m^3)^3$

58) $(8r)^3$

59) $(6^3)^4$

60) $(3^3)^3$

61) $(4 \cdot 4^4)^2 \cdot 4^4$

62) $2^4 \cdot (2^3)^4$

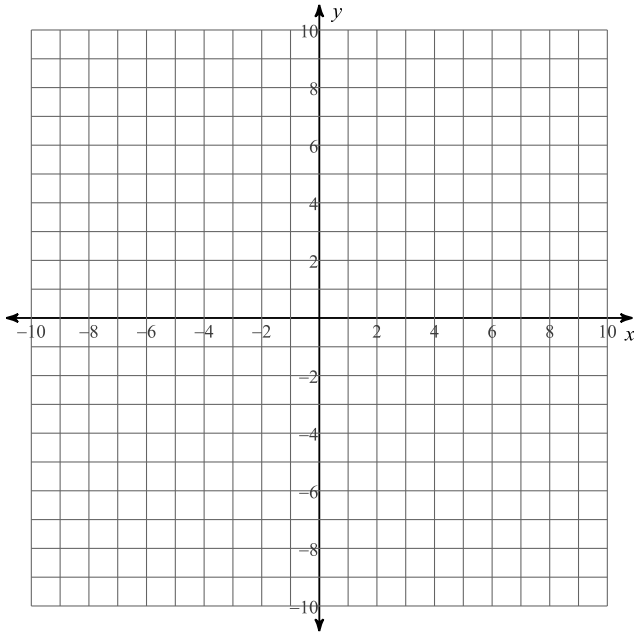
Solve each proportion.

63) $\frac{5}{x} = \frac{4}{3}$

64) $\frac{n}{5} = \frac{5}{9}$

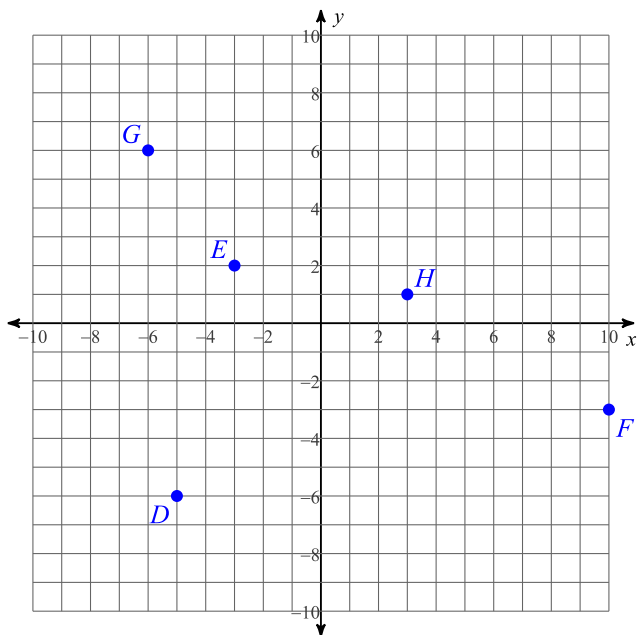
Plot each point.

- 65) $B(-5, 0)$ $C(-7, 4)$ $D(-10, 8)$
 $E(10, -4)$ $F(-10, -3)$



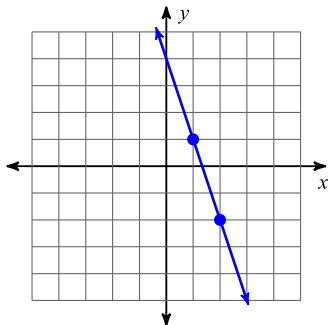
State the coordinates of each point.

66)



Find the slope of each line.

67)



68) $y = 10x - 5$

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

69) $(-16, 12), (-7, -4)$

70) $(-6, 18), (-4, 15)$

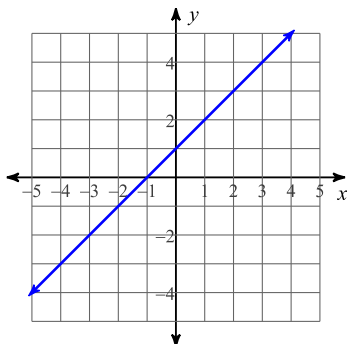
Sketch the graph of each line.

71) $y = \frac{5}{4}x$

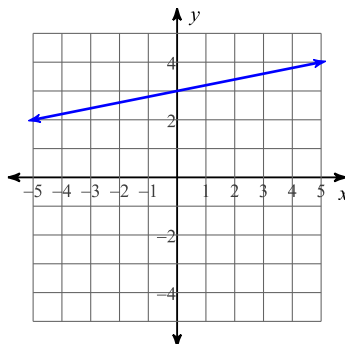
72) $y = -3x - 5$

Write the slope-intercept form of the equation of each line.

73)



74)



Write the slope-intercept form of the equation of each line given the slope and y-intercept.

75) Slope = 7, y-intercept = -2

76) Slope = $\frac{5}{3}$, y-intercept = -4

Write the slope-intercept form of the equation of the line through the given points.

77) through: $(-3, 0)$ and $(-1, 0)$

78) through: $(-1, 3)$ and $(0, 2)$

Solve each system by graphing.

79) $y = 2x + 2$
 $y = -x - 4$

80) $y = 8x + 4$
 $y = x - 3$

Solve each system by substitution.

81) $y = -2x$
 $2x + 2y = 10$

82) $y = 4$
 $3x + 4y = 1$

Find each square root.

83) $\sqrt{1}$

84) $\sqrt{4}$

85) $\sqrt{0}$

86) $\sqrt{81}$

87) $\sqrt{\frac{4}{36}}$

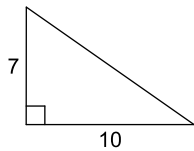
88) $\sqrt{\frac{64}{121}}$

89) $\sqrt{\frac{1}{16}}$

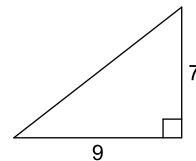
90) $\sqrt{\frac{4}{49}}$

Find each missing length to the nearest tenth.

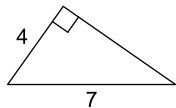
91)



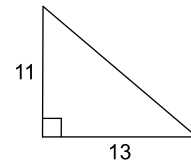
92)



93)



94)

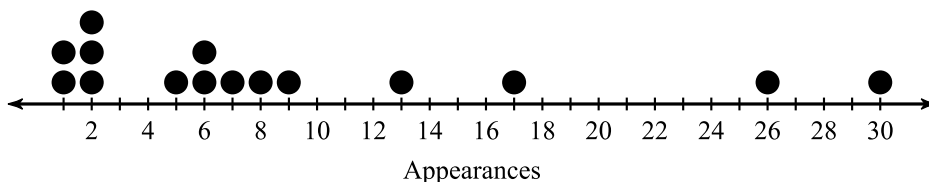


Find the median and mean for each data set.

95) Boiling Point

Substance	°C	Substance	°C
Silicon	2,357	Plutonium	3,232
Silver	2,162	Zinc	907
Water	100	Copper	2,562
Ethanol	78.4	Aluminum	2,519
Potassium	758.8	Tin	2,603
Chloroform	61.2	Nitric Acid	83
Sodium	882.8	Cobalt	2,870
Uranium	4,131	Calcium	1,484
Mercury	356.7		

96) Appearances in Basketball Tournament



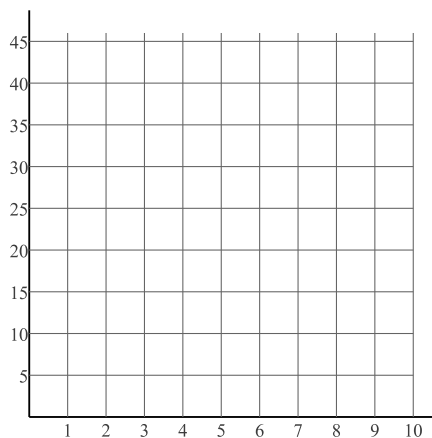
97) # Words in Book Titles

4	3	2	3	2	3	1	1
3	2	2	4	5	5	2	3
4							

Construct a scatter plot. State if there appears to be a positive correlation, negative correlation, or no correlation. When there is a correlation, identify the relationship as linear or nonlinear. Also find the slope-intercept form of the equation of the line that best fits the data.

98)

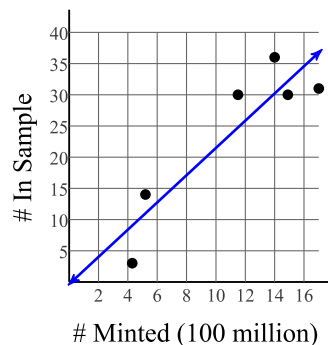
X	Y	X	Y	X	Y
0.5	39	6	20	7.2	15
0.5	46	6	27	8.6	13
2	37	6.6	17	9.6	7
3	29				



99) Totsakan collects coins. Over a three-year period he collected 1,000 nickels. After organizing them by year, he found that the number of nickels from a given year was related to the number minted that year:

Minted (100 mill.)	In Sample
4.3	3
5.2	14
11.5	30
14	36
14.9	30
17	31

Totsakan discovered that this can be modeled by the equation $y = 2.18x - 0.339$ where x is the number of nickels minted in a particular year in hundreds of millions and y is the number of nickels from that year in his sample.



- What does the slope of the line represent?
- What does the y-intercept of this function represent?
- Using this model, in a sample of 1,000 nickels how many would you expect to be from a year in which 8 hundred million were minted? Round your answer to the nearest whole number.