

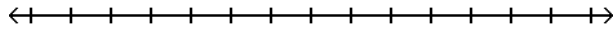
Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

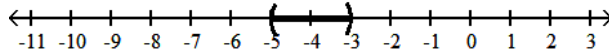
Solve the inequality and graph. Express your answer in interval notation.

1) $-13 \leq -3x + 2 \leq -7$

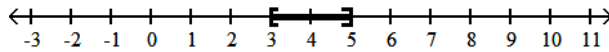
1) _____



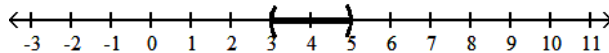
A) $(-5, -3)$



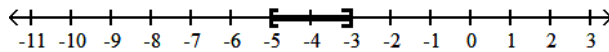
B) $[3, 5]$



C) $(3, 5)$



D) $[-5, -3]$



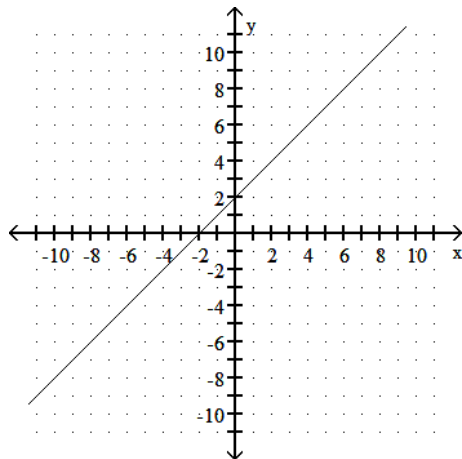
Answer: B

Explanation: A)
B)
C)
D)

Determine whether the slope of the line is positive, negative, zero, or undefined.

2) _____

2) _____



A) negative

B) undefined

C) positive

D) zero

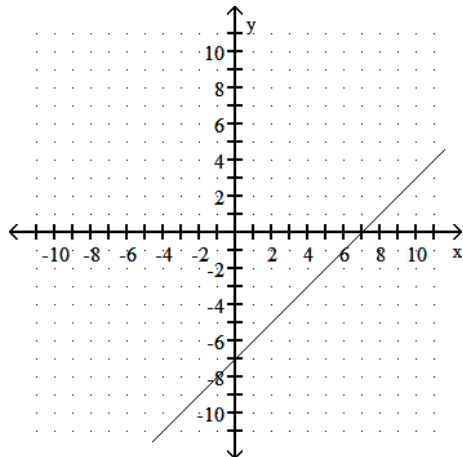
Answer: C

Explanation: A)
B)
C)
D)

Provide an appropriate response.

3) Use the graph to find the slope, x-intercept and y-intercept of the line.

3) _____



A) slope = -1

x-intercept = (7, 0)

y-intercept = (0, -7)

C) slope = -1

x-intercept = (-7, 0)

y-intercept = (0, 7)

B) slope = 1

x-intercept = (7, 0)

y-intercept = (0, -7)

D) slope = 1

x-intercept = (0, 7)

y-intercept = (-7, 0)

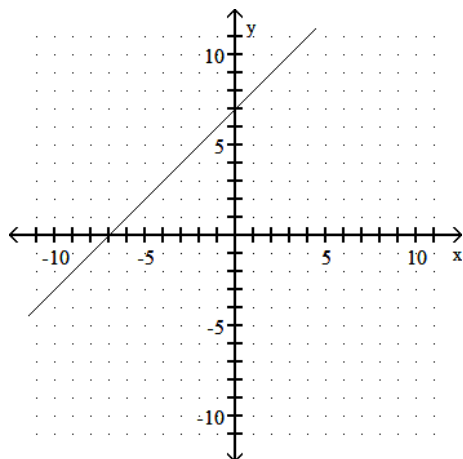
Answer: B

Explanation: A)
B)
C)
D)

Use the graph to find the average rate of change.

4)

4) _____



A) 7

B) -7

C) -1

D) 1

Answer: D

Explanation: A)
B)
C)
D)

Find the slope and y intercept of the graph of the equation.

5) $y = \frac{5}{2}x - \frac{3}{2}$

5) _____

A) Slope = $-\frac{3}{2}$; y intercept = $\frac{5}{2}$

B) Slope = $\frac{3}{2}$; y intercept = $\frac{5}{2}$

C) Slope = $\frac{5}{2}$; y intercept = $-\frac{3}{2}$

D) Slope = $\frac{5}{2}$; y intercept = $\frac{3}{2}$

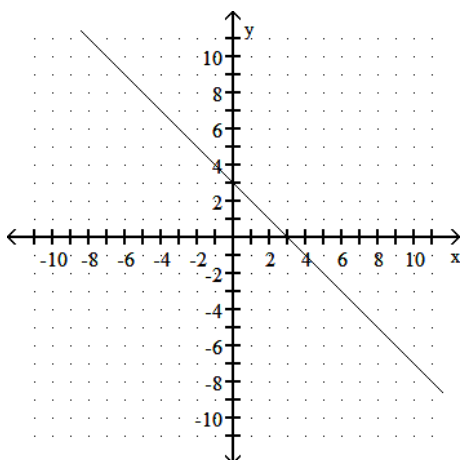
Answer: C

Explanation: A)
B)
C)
D)

Determine whether the slope of the line is positive, negative, zero, or undefined.

6)

6) _____



A) positive

B) negative

C) zero

D) undefined

Answer: B

Explanation: A)
B)
C)
D)

Provide an appropriate response.

7) Write the equation of a line that passes through $(-1, 4)$ and $(5, -1)$. Write the final answer in the form $Ax + By = C$ where A, B, and C are integers with no common divisors (other than ± 1) and $A > 0$.

7) _____

A) $5x - 6y = 19$

B) $-5x + 6y = 19$

C) $5x + 6y = -19$

D) $5x + 6y = 19$

Answer: D

Explanation: A)
B)
C)
D)

Solve the problem.

- 8) Assume that the price per unit d of a certain item to the consumer is given by the equation $d = 35 - .10x$, where x is the number of units in demand. The price per unit from the supplier is given by the equation $s = .2x + 20$, where x is the number of units supplied. Find the equilibrium price and the equilibrium quantity.

8) _____

- A) equilibrium price: \$30 per unit; equilibrium quantity: 50 units
- B) equilibrium price: \$20 per unit; equilibrium quantity: 50 units
- C) equilibrium price: \$50 per unit; equilibrium quantity: 30 units
- D) equilibrium price: \$35 per unit; equilibrium quantity: 50 units

Answer: A

Explanation: A)
B)
C)
D)

Write the slope-intercept equation ($y = mx + b$) for a line with the given characteristics.

- 9) $m = -4$, y -intercept $(0, -7)$

9) _____

- A) $y = -7x - 4$
- B) $y = -4x$
- C) $y = -4x - 7$
- D) $4x + y = -7$

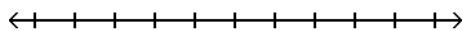
Answer: C

Explanation: A)
B)
C)
D)

Solve the inequality and graph. Express your answer in interval notation.

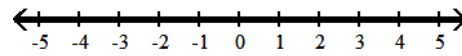
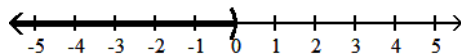
- 10) $-4(-2 - x) < 6x + 19 - 11 - 2x$

10) _____



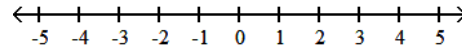
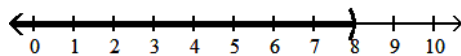
- A) $(-\infty, 0)$

- B) $(-\infty, \infty)$



- C) $(-\infty, 8)$

- D) $\emptyset$



Answer: D

Explanation: A)
B)
C)
D)

Find the slope and y intercept of the graph of the equation.

11) $y = -2x + 4$

A) Slope = 4, y intercept = -2

C) Slope = -2, y intercept = 4

B) Slope = 2, y intercept = -4

D) Slope = -4, y intercept = -2

11) _____

Answer: C

Explanation: A)
B)
C)
D)

Write an equation of the line with the indicated slope and y intercept.

12) Slope = $-\frac{4}{5}$; y intercept = $\frac{27}{5}$

12) _____

A) $y = \frac{4}{5}x + \frac{17}{5}$

B) $y = -\frac{5}{4}x + \frac{27}{5}$

C) $y = -\frac{4}{5}x + \frac{27}{5}$

D) $y = -\frac{4}{5}x - \frac{27}{5}$

Answer: C

Explanation: A)
B)
C)
D)

Use the REGRESSION feature on a graphing calculator.

- 13) For some reason the quality of production decreased as the year progressed at a flash drive manufacturing plant. The following data represent the percentage of defective flash drives produced at the plant in the corresponding month of the year.

13) _____

Month, x	2	3	5	7	8	9	12
% defective, y	1.3	1.6	2.0	2.4	2.6	2.8	3.1

Use the regression equation with values rounded to four decimals to predict the percentage of defective drives in month 6, June.

A) 2.20%

B) 2.3%

C) 2.0%

D) 2.15%

Answer: D

Explanation: A)
B)
C)
D)

Solve the problem. Express your answer as an integer or simplified fraction.

14) $-2(2x + 1) - 1 = -5(x + 1) + 4x$

14) _____

A) $\left\{\frac{2}{5}\right\}$

B) $\left\{\frac{2}{3}\right\}$

C) $\left\{\frac{5}{3}\right\}$

D) $\left\{-\frac{1}{3}\right\}$

Answer: B

Explanation: A)
B)
C)
D)

Use the REGRESSION feature on a graphing calculator.

- 15) Efficiency experts rate employees according to job performance and attitude. The results for several randomly selected employees are given below. 15) _____

Attitude, x	59	63	65	69	58	77	76	69	70	64
Performance, y	72	67	78	82	75	87	92	83	87	78

Find the regression line which can be used to predict performance rating if attitude rating is known.

A) $y = -47.3 + 2.02x$

B) $y = 2.81 + 1.35x$

C) $y = 92.3 - 0.669x$

D) $y = 11.7 + 1.02x$

Answer: D

Explanation: A)
B)
C)
D)

Write an equation of the line with the indicated slope and y intercept.

- 16) Slope = $-\frac{1}{2}$; y intercept = -5 16) _____

A) $y = -\frac{x}{2} - 5$

B) $y = \frac{x}{2} - 5$

C) $y = -5x - \frac{1}{2}$

D) $y = -5x + \frac{1}{2}$

Answer: A

Explanation: A)
B)
C)
D)

Solve the problem. Express your answer as an integer or simplified fraction.

- 17) $\frac{x}{16} - \frac{5}{8} = \frac{x+6}{8}$ 17) _____

A) - 11

B) - 16

C) - 22

D) - 17

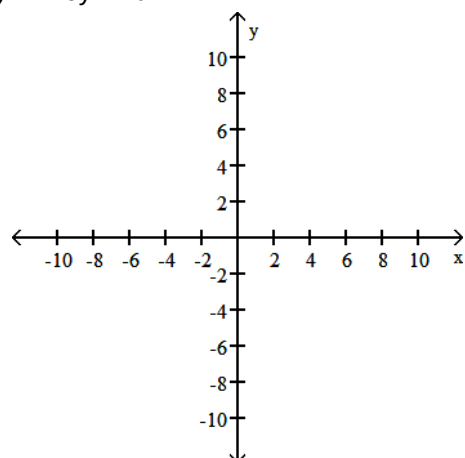
Answer: C

Explanation: A)
B)
C)
D)

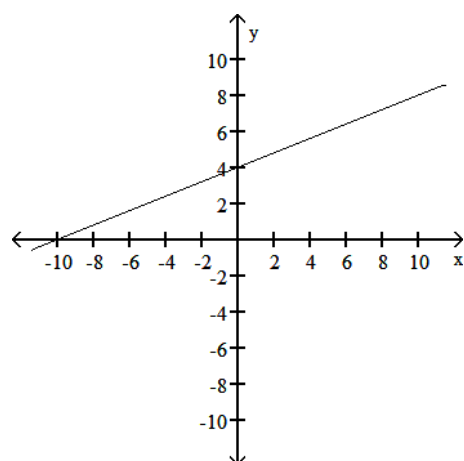
Graph the linear equation and determine its slope, if it exists.

18) $2x - 5y = 20$

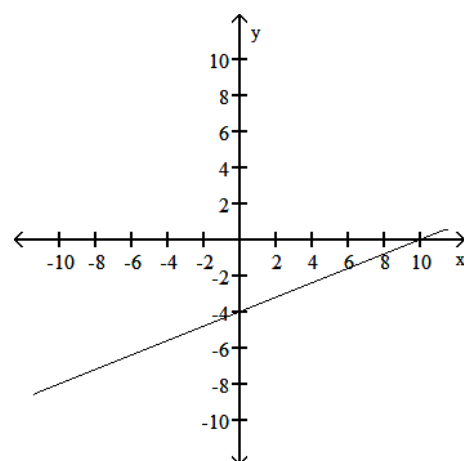
18) _____



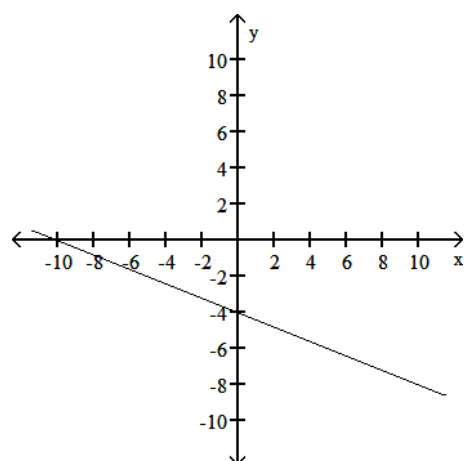
A) slope = $\frac{2}{5}$



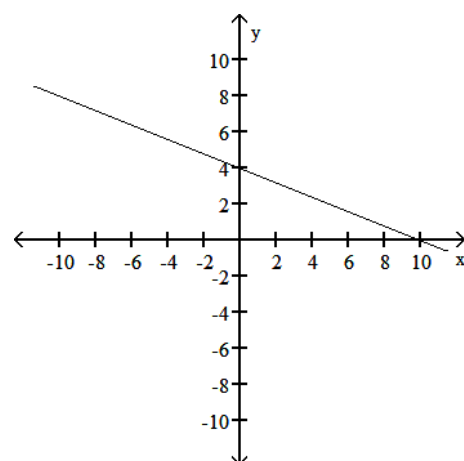
B) slope = $\frac{2}{5}$



C) slope = $-\frac{2}{5}$



D) slope = $-\frac{2}{5}$



Answer: B

Explanation: A)
B)
C)
D)

Find the slope and y intercept of the graph of the equation.

19) $y = x - 4$

A) Slope = 0; y intercept = 4

B) Slope = 1; y intercept = -4

C) Slope = -4; y intercept = -1

D) Slope = -4; y intercept = 1

Answer: B

Explanation: A)
B)
C)
D)

19) _____

Solve the problem.

20) The mathematical model $C = 600x + 30,000$ represents the cost in dollars a company has in manufacturing x items during a month. Using this model, how much does it cost to produce 600 items?

A) \$360,000

B) \$390,000

C) \$50.00

D) \$0.08

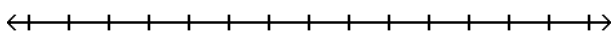
Answer: B

Explanation: A)
B)
C)
D)

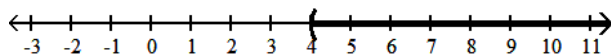
20) _____

Solve the inequality and graph. Express your answer in interval notation.

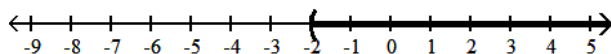
21) $8x - 3 > 7x + 1$



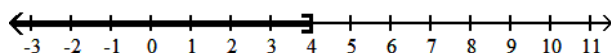
A) $(4, \infty)$



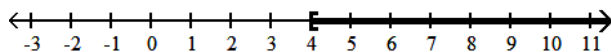
B) $(-2, \infty)$



C) $(-\infty, 4]$



D) $[4, \infty)$



Answer: A

Explanation: A)
B)
C)
D)

21) _____

Solve the problem. Express your answer as an integer or simplified fraction.

22) $\frac{1}{9}(x + 18) - \frac{1}{7}(x - 7) = x - 9$

22) _____

A) $\left\{\frac{378}{65}\right\}$

B) $\left\{\frac{126}{13}\right\}$

C) $\left\{\frac{504}{65}\right\}$

D) $\left\{\frac{756}{65}\right\}$

Answer: D

Explanation: A)
B)
C)
D)

Find the slope of the line containing the given points.

23) (1, -4); (-4, 8)

23) _____

A) $\frac{12}{5}$

B) $\frac{5}{12}$

C) $-\frac{5}{12}$

D) $-\frac{12}{5}$

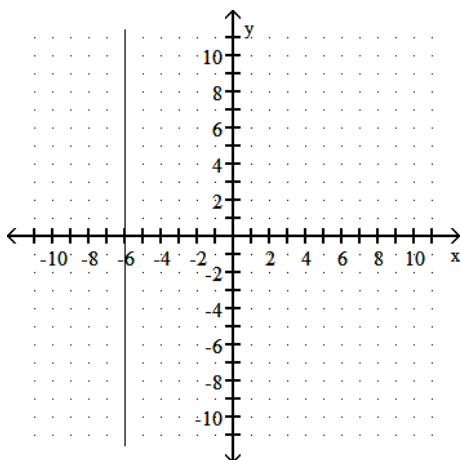
Answer: D

Explanation: A)
B)
C)
D)

Determine whether the slope of the line is positive, negative, zero, or undefined.

24)

24) _____



A) zero

B) undefined

C) negative

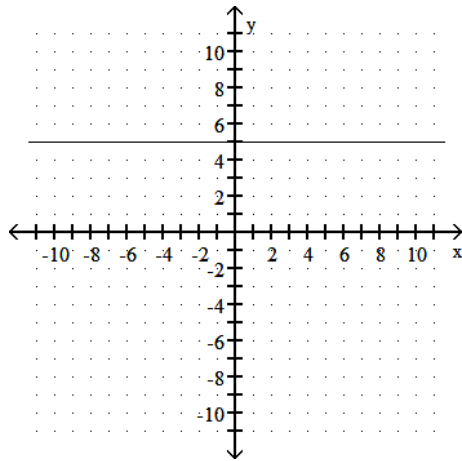
D) positive

Answer: B

Explanation: A)
B)
C)
D)

25)

25) _____



A) zero

B) undefined

C) positive

D) negative

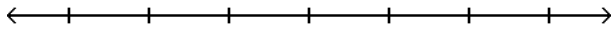
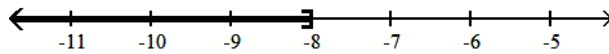
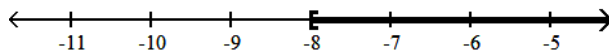
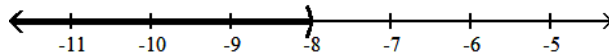
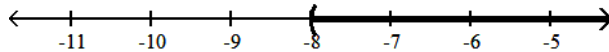
Answer: A

Explanation: A)
B)
C)
D)

Solve the inequality and graph. Express your answer in interval notation.

26) $-2(5x - 17) < -12x + 18$

26) _____

A) $(-\infty, -8]$ B) $[-8, \infty)$ C) $(-\infty, -8)$ D) $(-8, \infty)$ 

Answer: C

Explanation: A)
B)
C)
D)

Solve the formula for the specified variable.

27) $7x + 10y = 19$ for y

A) $y = \frac{7}{10}x + \frac{19}{10}$

C) $-7x - 10y = -19$

B) $y = -\frac{7}{10}x + \frac{19}{10}$

D) $y = 7x - 19$

27) _____

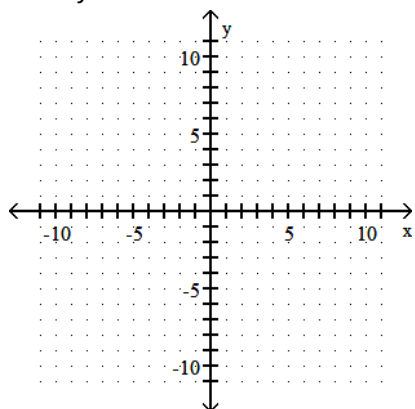
Answer: B

Explanation: A)
B)
C)
D)

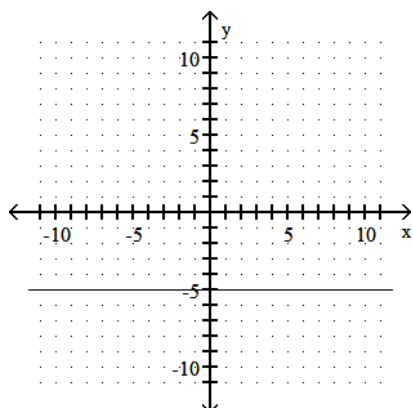
Graph the equation.

28) $35 + 5y = 0$

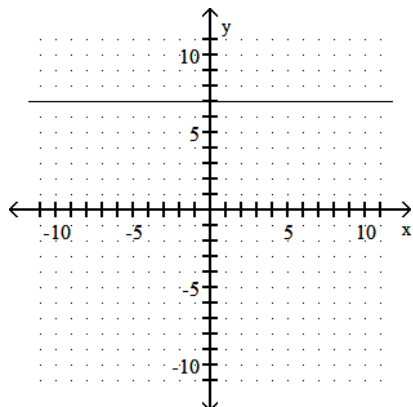
28) _____



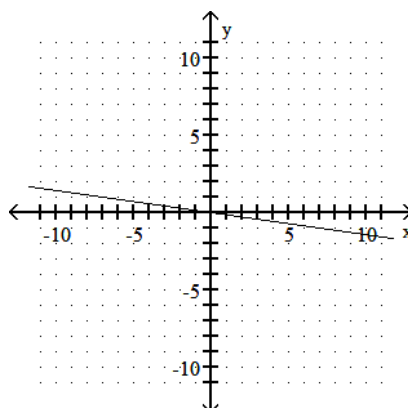
A)



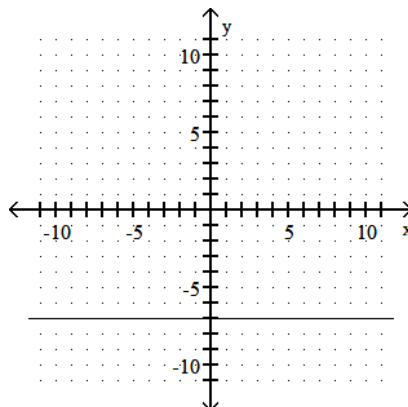
C)



B)



D)



Answer: D

Explanation: A)

Explanation: A)
B)
C)
D)

Solve the formula for the specified variable.

29) $S = 2\pi rh + 2\pi r^2$ for h

29) _____

A) $h = S - r$

B) $h = \frac{S}{2\pi r} - 1$

C) $h = 2\pi(S - r)$

D) $h = \frac{S - 2\pi r^2}{2\pi r}$

Answer: D

Explanation: A)
B)
C)
D)

Solve the problem.

30) The cost of manufacturing a computer part is related to the quantity produced, x, during a production run. When 100 parts are produced, the cost is \$300. When 600 parts are produced, the cost is \$4800. Find an equation of the line relating quantity produced to cost. Write the final answer in the form $C = mx + b$.

30) _____

A) $C = 9x$

B) $C = 9x - 600$

C) $C = 600x + 9$

D) $C = 9x + 600$

Answer: B

Explanation: A)
B)
C)
D)

Write an equation of the line with the indicated slope and y intercept.

31) Slope = 4, y intercept = -6

31) _____

A) $y = -4x - 6$

B) $y = 6x - 4$

C) $y = 6x + 4$

D) $y = 4x - 6$

Answer: D

Explanation: A)
B)
C)
D)

Solve the problem. Express your answer as an integer or simplified fraction.

32) Solve: $\frac{x-2}{3} - \frac{x-3}{6} = \frac{3-x}{2} - 3$

32) _____

A) 2

B) -3

C) -2

D) 3

Answer: C

Explanation: A)
B)
C)
D)

Provide an appropriate response.

33) Find the line passing through the two points. Write the equation in standard form.

33) _____

(10, 9) and (10, 1)

A) $x + y = 11$

B) $x + y = 19$

C) $y = 9$

D) $x = 10$

Answer: D

Explanation: A)
B)
C)
D)

Solve the problem.

34) Using a phone card to make a long distance call costs a flat fee of \$0.85 plus per \$0.19 minute starting with the first minute. Find the total cost of a phone call which lasts 8 minutes.

34) _____

A) \$1.52

B) \$6.00

C) \$2.37

D) \$8.16

Answer: C

Explanation: A)
B)
C)
D)

35) Suppose the sales of a particular brand of MP3 player satisfy the relationship $S = 200x + 3800$, where S represents the number of sales in year x , with $x = 0$ corresponding to 2002. Find the number of sales in 2005.

35) _____

A) 12,600

B) 4200

C) 6400

D) 4400

Answer: D

Explanation: A)
B)
C)
D)

36) A piece of equipment was purchased by a company for \$10,000 and is assumed to have a salvage value of \$3,000 in 10 years. If its value is depreciated linearly from \$10,000 to \$3,000, find a linear equation in the form $V = mt + b$, t time in years, that will give the salvage value at any time t , $0 \leq t \leq 10$.

36) _____

A) $V = -700t - 10,000$

B) $V = -700t + 10,000$

C) $V = 700t + 10,000$

D) $T = -700V + 10,000$

Answer: B

Explanation: A)
B)
C)
D)

- 37) The cost for labor associated with fixing a washing machine is computed as follows: There is a fixed charge of \$25 for the repairman to come to the house, to which a charge of \$20 per hour is added. Find an equation that can be used to determine the labor cost, C , of a repair that takes x hours. Write the final answer in the form $C = mx + b$. 37) _____

A) $C = 45x$ B) $C = 20x + 25$ C) $C = -20x + 25$ D) $C = 25x + 20$

Answer: B

Explanation: A)
B)
C)
D)

- 38) Find the Celsius temperature (to the nearest degree) when Fahrenheit temperature is 68° by solving the equation $68 = \frac{9}{5}C + 32$, where F is the Fahrenheit temperature (in degrees) and C is the Celsius temperature. 38) _____

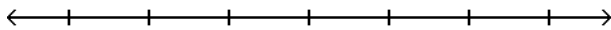
A) 34°C B) 129°C C) 20°C D) 154°C

Answer: C

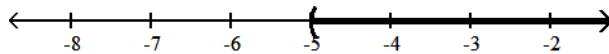
Explanation: A)
B)
C)
D)

Solve the inequality and graph. Express your answer in interval notation.

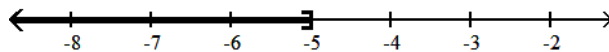
- 39) $16x - 4 > 4(3x - 6)$ 39) _____



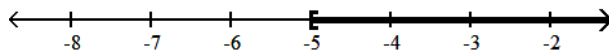
A) $(-5, \infty)$



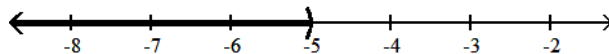
B) $(-\infty, -5]$



C) $[-5, \infty)$



D) $(-\infty, -5)$



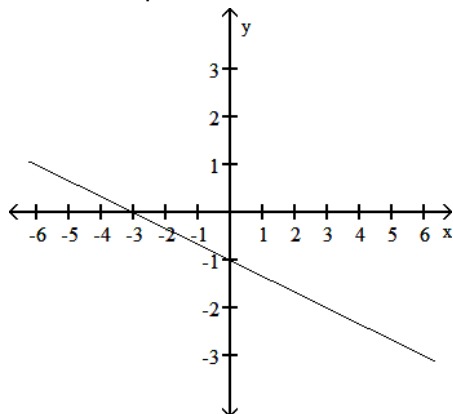
Answer: A

Explanation: A)
B)
C)
D)

Provide an appropriate response.

40) Write the equation of the line in the following graph.

40) _____



A) $f(x) = -\frac{1}{3}x - 1$

B) $f(x) = -\frac{1}{3}x + 1$

C) $f(x) = \frac{1}{3}x + 1$

D) $f(x) = \frac{1}{3}x - 1$

Answer: A

Explanation: A)
B)
C)
D)

Solve the problem. Express your answer as an integer or simplified fraction.

41) $7x - (5x - 1) = 2$

41) _____

A) $\frac{1}{2}$

B) $-\frac{1}{2}$

C) $\frac{1}{12}$

D) $-\frac{1}{12}$

Answer: A

Explanation: A)
B)
C)
D)

Find the slope and y intercept of the graph of the equation.

42) $y = -\frac{x}{2} + 4$

42) _____

A) Slope = $-\frac{1}{2}$; y intercept = -4

B) Slope = $-\frac{1}{2}$; y intercept = 4

C) Slope = 4; y intercept = $-\frac{1}{2}$

D) Slope = 4; y intercept = $\frac{1}{2}$

Answer: B

Explanation: A)
B)
C)
D)

Provide an appropriate response.

43) Find the slope of the line $3x + 4y = 11$.

A) 0

B) $\frac{3}{4}$

C) $-\frac{3}{4}$

D) $-\frac{4}{3}$

43) _____

Answer: C

Explanation: A)
B)
C)
D)

Find the slope of the line containing the given points.

44) (6, 1) and (6, -4)

A) -4

B) $-\frac{1}{4}$

C) 0

D) Undefined

44) _____

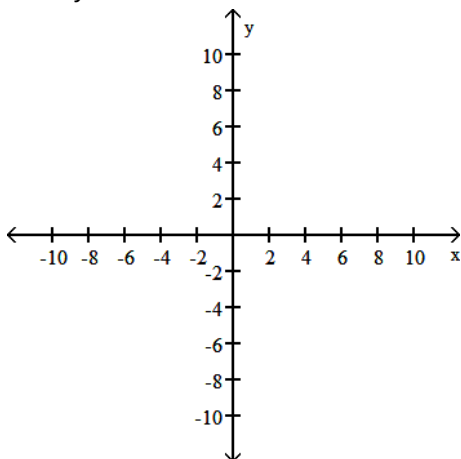
Answer: D

Explanation: A)
B)
C)
D)

Graph the linear equation and determine its slope, if it exists.

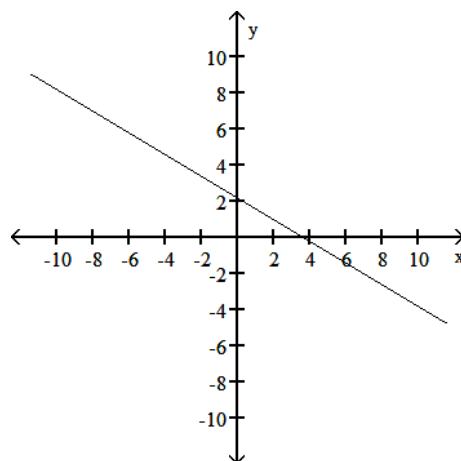
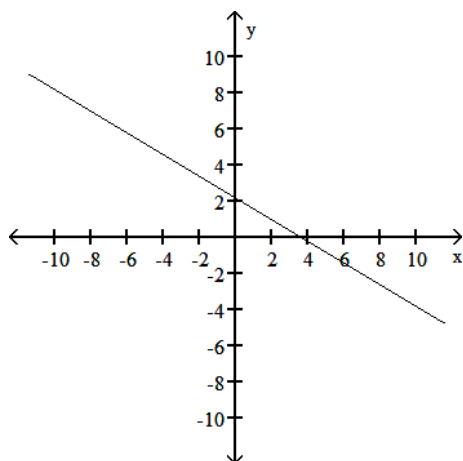
45) $3x + 5y = 11$

45) _____

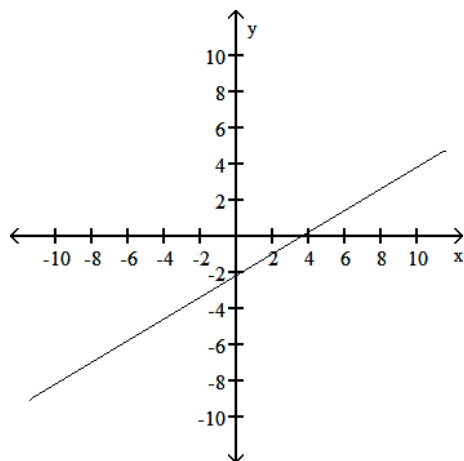


A) slope: $\frac{3}{4}$

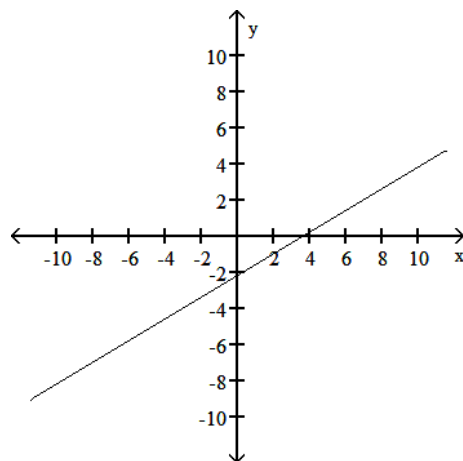
B) slope: $-\frac{3}{4}$



C) slope: $-\frac{3}{4}$



D) slope: $\frac{3}{4}$



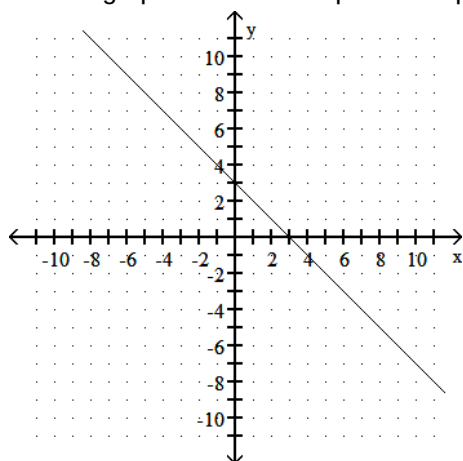
Answer: B

Explanation: A)
B)
C)
D)

Provide an appropriate response.

46) Use the graph to find the slope-intercept form of the equation of the line.

46) _____



A) $y = -x + 3$

B) $y = x + 3$

C) $y = x - 3$

D) $y = 3x$

Answer: A

Explanation: A)
B)
C)
D)

Write an equation of the line with the indicated slope and y intercept.

47) Slope = $\frac{5}{2}$; y intercept = $-\frac{7}{2}$

47) _____

A) $y = \frac{7}{2}x - \frac{5}{2}$

B) $y = \frac{5}{2}x - \frac{7}{2}$

C) $y = \frac{5}{2}x + \frac{7}{2}$

D) $y = -\frac{7}{2}x + \frac{5}{2}$

Answer: B

Explanation: A)
B)
C)
D)

Provide an appropriate response.

48) Find the standard form of the equation of the line with slope of $-\frac{2}{7}$ and passing through (4, 4).

48) _____

A) $2x + 7y = -36$

B) $7x + 2y = -36$

C) $2x + 7y = 36$

D) $2x - 7y = 36$

Answer: C

Explanation: A)
B)
C)
D)

Solve the problem. Express your answer as an integer or simplified fraction.

49) $\frac{x}{6} - 4 = \frac{x}{3} - 3$

49) _____

A) 14

B) -6

C) -2

D) -14

Answer: B

Explanation: A)
B)
C)
D)

Write the slope-intercept equation ($y = mx + b$) for a line with the given characteristics.

50) $m = 3$, passing through (1, -2)

50) _____

A) $y = 3x - 5$

B) $y - 5 = 3x$

C) $y = 3x$

D) $y = 5x - 3$

Answer: A

Explanation: A)
B)
C)
D)

Use the REGRESSION feature on a graphing calculator.

- 51) In the table below, x represents the number of years since 2000 and y represents sales (in thousands of dollars) of a clothing company. Use the regression equation to estimate sales in the year 2006. Round to the nearest thousand dollars. 51) _____

Year x	1	2	3	4	5
Sales y	84	76	39	30	26

- A) \$20,000 B) \$2,000 C) \$14,000 D) \$8,000

Answer: B

Explanation: A)
B)
C)
D)

- 52) A study was conducted to compare the average time spent in the lab each week versus course grade for computer students. The results are recorded in the table below. 52) _____

Hours in lab	10	11	16	9	7	15	16	10
Grade (percent)	96	51	62	58	89	81	46	51

Use linear regression to find a linear function that predicts a student's course grade as a function of the number of hours spent in lab.

- A) $y = 1.86 + 88.6x$ B) $y = 0.930 + 44.3x$
C) $y = 88.6 - 1.86x$ D) $y = 44.3 + 0.930x$

Answer: C

Explanation: A)
B)
C)
D)

Write an equation of the line with the indicated slope and y intercept.

- 53) Slope = -3, y intercept = 5 53) _____

- A) $y = -3x + 5$ B) $y = 5x - 3$ C) $y = -3x - 5$ D) $y = 3x + 5$

Answer: A

Explanation: A)
B)
C)
D)

Solve the problem.

- 54) A small company that makes hand-sewn leather shoes has fixed costs of \$320 a day, and total costs of \$1200 per day at an output of 20 pairs of shoes per day. Assume that total cost C is linearly related to output x . Find an equation of the line relating output to cost. Write the final answer in the form $C = mx + b$. 54) _____

- A) $C = 60x + 1520$ B) $C = 60x + 320$ C) $C = 44x + 320$ D) $C = 44x + 1520$

Answer: C

Explanation: A)
B)
C)
D)

- 55) You have \$50,000 and wish to invest part at 10% and the rest at 6%. How much should be invested at each rate to produce the same return as if it all had been invested at 9%? 55) _____
- A) \$37,500 at 6%, \$12,500 at 10% B) \$37,000 at 6%, \$13,000 at 10%
- C) \$37,000 at 10%, \$13,000 at 6% D) \$37,500 at 10%, \$12,500 at 6%

Answer: D

Explanation: A)
B)
C)
D)

- 56) At a local grocery store the demand for ground beef is approximately 50 pounds per week when the price per pound is \$4, but is only 40 pounds per week when the price rises to \$5.50 per pound. Assuming a linear relationship between the demand x and the price per pound p , express the price as a function of demand. Use this model to predict the demand if the price rises to \$5.80 per pound. 56) _____
- A) $p = 0.15x + 11.5$; 38 pounds B) $p = 11.5x + -0.15$; 40 pounds
- C) $p = -0.15x + 11.5$; 38 pounds D) $p = -0.15x - 11.5$; 40 pounds

Answer: C

Explanation: A)
B)
C)
D)

Provide an appropriate response.

- 57) Find the standard form of the equation of the line passing through the two points. 57) _____
- (2, - 6) and (- 9, 6)
- A) $12x + 11y = - 42$ B) $8x - 15y = - 18$
- C) $- 12x + 11y = - 42$ D) $- 8x + 15y = - 18$

Answer: A

Explanation: A)
B)
C)
D)

- 58) Given two points (x_1, y_1) and (x_2, y_2) , the ratio of the change in y to the change in x is called. 58) _____
- A) x -intercept B) equilibrium point
- C) slope D) break-even point

Answer: C

Explanation: A)
B)
C)
D)

Use the REGRESSION feature on a graphing calculator.

- 59) The paired data below consists of the temperature on randomly chosen days and the amount of a certain kind of plant grew (in millimeters). 59) _____

Temp, x	62	76	50	51	71	46	51	44	79
Growth, y	36	39	50	13	33	33	17	6	16

Find the linear function that predicts a plant's growth as a function of the temperature. Round your answer to two decimal places.

- A) $y = 14.57x + 0.21$
 B) $y = -9.19x^3 + 0.11x^2 - 2.90x + 6.54$
 C) $y = -0.06x^2 + 7.20x - 191.23$
 D) $y = 0.21x + 14.57$

Answer: D

Explanation: A)
 B)
 C)
 D)

Solve the formula for the specified variable.

- 60) $F = \frac{9}{5}C + 32$ for C 60) _____

- A) $C = \frac{9}{5}(F - 32)$
 B) $C = \frac{5}{F - 32}$
 C) $C = \frac{F - 32}{9}$
 D) $C = \frac{5}{9}(F - 32)$

Answer: D

Explanation: A)
 B)
 C)
 D)

- 61) Solve: $D = \frac{4}{5}(mx - mb)$ for m 61) _____

- A) $m = \frac{4D}{5(x - b)}$
 B) $m = \frac{4D}{5(x + b)}$
 C) $m = \frac{5D}{4(x + b)}$
 D) $m = \frac{5D}{4(x - b)}$

Answer: D

Explanation: A)
 B)
 C)
 D)

Find the slope of the line containing the given points.

- 62) (-5, 2) and (0, 2) 62) _____

- A) $-\frac{5}{2}$
 B) 0
 C) $\frac{5}{2}$
 D) Undefined

Answer: B

Explanation: A)
 B)
 C)
 D)

Provide an appropriate response.

- 63) Write the equation of a line that passes through (3, 9) and (0, -7). Write the final answer in the form $Ax + By = C$ where A, B, and C are integers with no common divisors (other than ± 1) and $A > 0$. 63) _____

A) $16x - 3y = 21$ B) $16x - 3y = -21$ C) $-16x + 3y = 21$ D) $3x - 16y = 21$

Answer: A

Explanation: A)
B)
C)
D)

Find the slope and y intercept of the graph of the equation.

- 64) $y = -\frac{2}{5}x + \frac{16}{5}$ 64) _____

A) Slope = $\frac{5}{2}$; y intercept = $\frac{6}{5}$

B) Slope = $\frac{2}{5}$; y intercept = $\frac{6}{5}$

C) Slope = $-\frac{2}{5}$; y intercept = $\frac{16}{5}$

D) Slope = $\frac{2}{5}$; y intercept = $\frac{16}{5}$

Answer: C

Explanation: A)
B)
C)
D)

Use the REGRESSION feature on a graphing calculator.

- 65) The use of bottled water in the United States has shown a steady increase in recent years. The table shows the annual per capita consumption for the years 1995 - 2001. 65) _____

Year	1995	1996	1997	1998	1999	2000	2001
Gallons/person	4.4	5.1	5.7	6.4	7.3	8.0	10.2

With x being the years since 1995, find the linear function that represents this data. Round your answer to two decimal places.

A) $y = 4.07x + 0.89$

B) $y = 0.89x + 4.07$

C) $y = 0.1x^2 + 0.29x + 4.57$

D) $y = 0.04x^3 - 0.23x^2 + 1.01x + 4.35$

Answer: B

Explanation: A)
B)
C)
D)

Solve the problem. Express your answer as an integer or simplified fraction.

- 66) $\frac{5x - 7}{5} = \frac{7x + 3}{2}$ 66) _____

A) $-\frac{1}{25}$

B) $-\frac{29}{25}$

C) $\frac{29}{45}$

D) $\frac{1}{45}$

Answer: B

Explanation: A)
B)
C)
D)

Provide an appropriate response.

67) Find the line passing through the two points. Write the equation in standard form.

67) _____

$(-3, 6)$ and $(6, 6)$

A) $x = -2$

B) $y = 6$

C) $-2x - y = 0$

D) $-x - 2y = 0$

Answer: B

Explanation: A)
B)
C)
D)

Find the slope and y intercept of the graph of the equation.

68) $y = 2x - 6$

68) _____

A) Slope = 6, y intercept = 2

B) Slope = 2, y intercept = -6

C) Slope = -6, y intercept = 2

D) Slope = 2, y intercept = 6

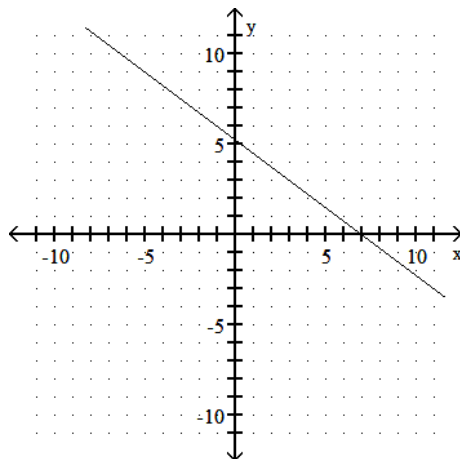
Answer: B

Explanation: A)
B)
C)
D)

Use the graph to find the average rate of change.

69)

69) _____



A) $\frac{3}{4}$

B) $-\frac{4}{3}$

C) $\frac{4}{3}$

D) $-\frac{3}{4}$

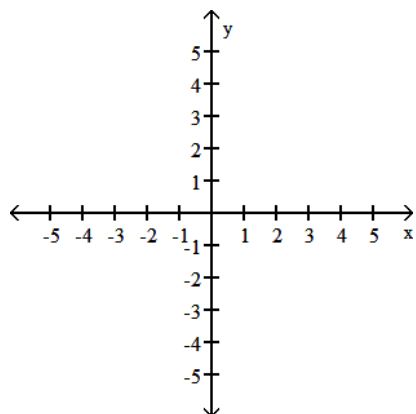
Answer: D

Explanation: A)
B)
C)
D)

Provide an appropriate response.

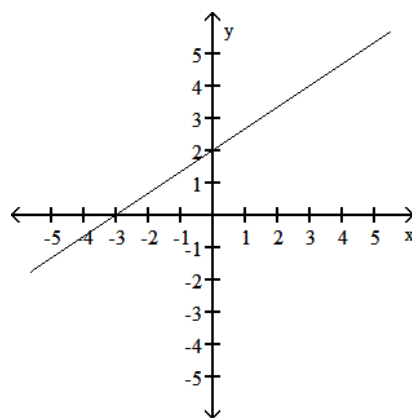
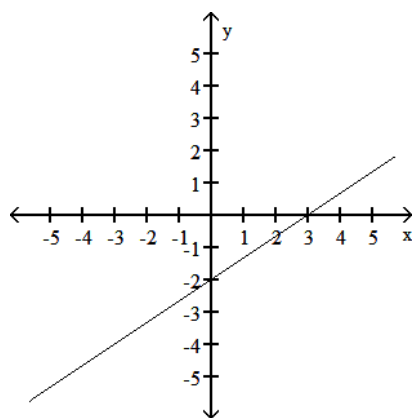
70) Graph the linear function defined by $f(x) = \frac{2}{3}x + 2$ and indicate the slope and intercepts.

70) _____



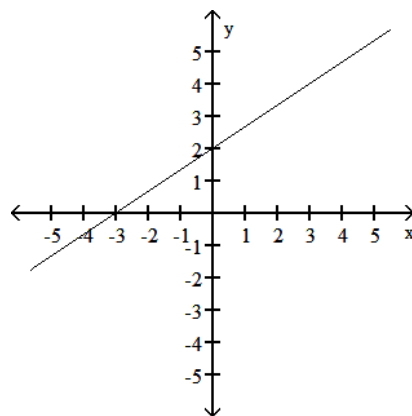
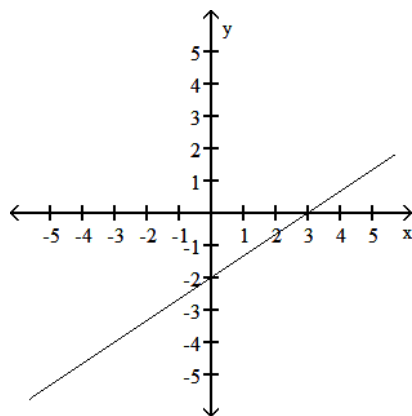
A) x-intercept = -2; y-intercept = 3; slope $\frac{2}{3}$

B) x-intercept = -3; y-intercept = 2; slope $\frac{2}{3}$



C) x-intercept = 3; y-intercept = -2; slope $\frac{2}{3}$

D) x-intercept = 2; y-intercept = -3; slope $\frac{2}{3}$



Answer: B

Explanation: A)
B)
C)
D)

Write an equation of the line with the indicated slope and y intercept.

71) Slope = 1; y intercept = -2

A) $y = -2x + 1$

B) $y = -2x - 1$

C) $y = x - 2$

D) $y = -x - 2$

71) _____

Answer: C

Explanation: A)
B)
C)
D)

Answer Key
Testname: C1

- 1) B
- 2) C
- 3) B
- 4) D
- 5) C
- 6) B
- 7) D
- 8) A
- 9) C
- 10) D
- 11) C
- 12) C
- 13) D
- 14) B
- 15) D
- 16) A
- 17) C
- 18) B
- 19) B
- 20) B
- 21) A
- 22) D
- 23) D
- 24) B
- 25) A
- 26) C
- 27) B
- 28) D
- 29) D
- 30) B
- 31) D
- 32) C
- 33) D
- 34) C
- 35) D
- 36) B
- 37) B
- 38) C
- 39) A
- 40) A
- 41) A
- 42) B
- 43) C
- 44) D
- 45) B
- 46) A
- 47) B
- 48) C
- 49) B
- 50) A

Answer Key
Testname: C1

- 51) B
- 52) C
- 53) A
- 54) C
- 55) D
- 56) C
- 57) A
- 58) C
- 59) D
- 60) D
- 61) D
- 62) B
- 63) A
- 64) C
- 65) B
- 66) B
- 67) B
- 68) B
- 69) D
- 70) B
- 71) C