

Student: _____

Instructor: Alfredo Alvarez

Assignment:

Date: _____

Course: Math 0410 / 0320 Alvarez

MATH5THGRADEWARMUP105j

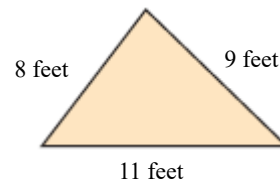
1. Write the whole number in expanded form.

6620

6620 = (Type your answer using plus signs.)

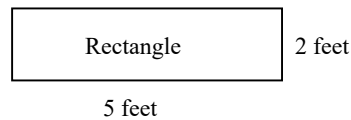
Answer: 6000 + 600 + 20

2. Find the perimeter of the figure.

The perimeter is feet.

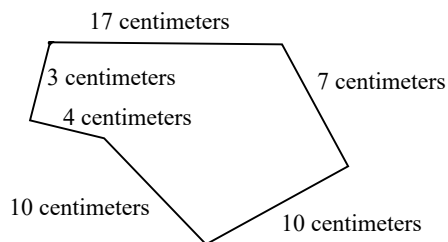
Answer: 28

3. Find the perimeter of the figure.

 ft

Answer: 14

4. Find the perimeter of the figure.

 cm

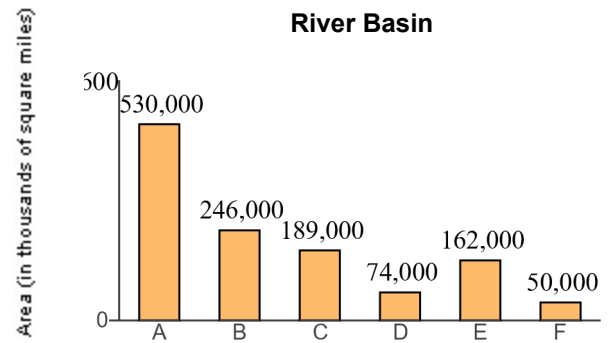
Answer: 51

5. A new notebook computer with DVD player costs \$863. Derik Muller has \$1252 in his checking account. How much will be left in his checking account after he buys the notebook computer?

Derik will have \$ remaining in his checking account after he buys the notebook computer.

Answer: 389

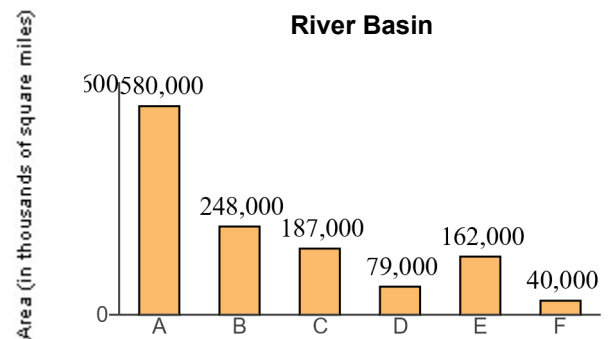
6. Find the total land area drained by the C and D sub-basins.



sq mi

Answer: 263,000

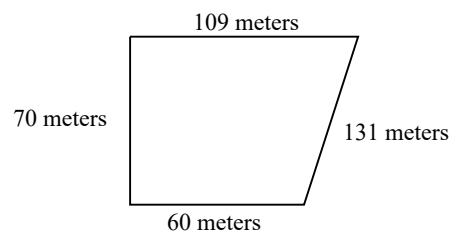
7. How many more square miles of land is drained by the A sub-basin than the B sub-basin?



sq mi

Answer: 332,000

8. Alexander is installing a pen for his dog. The pen will have the shape and dimensions of the figure shown to the right. How many meters of fencing are needed to enclose the the area shown?



m

Answer: 370

9. Evelyn Abrams is reading a 544-page book. If she has just finished reading page 455, how many more pages must she read to finish the book?

pages

Answer: 89

10. A permanent game board is made of granite. It is in the shape of a square with side lengths of 45 ft. Find the perimeter of the square playing board.

The perimeter is feet.

Answer: 180

11. The table on the right shows the number of a particular store in ten states. What is the total number of stores located in the three states with the most stores?

State	Number of Stores
Arizona	74
California	92
Florida	158
Georgia	39
Illinois	96
New York	140
Michigan	61
Minnesota	46
Ohio	63
Texas	38

A total of stores are located in the three states with the most stores.

Answer: 394

12. Round 3,656 to the nearest hundred.

The number 3,656 rounded to the nearest hundred is .

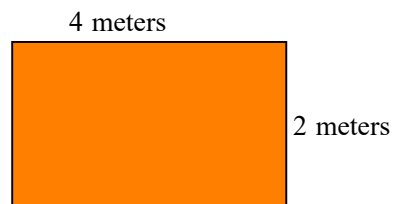
Answer: 3,700

13. Round 48,443 to the nearest thousand.

48,443 rounded to the nearest thousand is .

Answer: 48,000

14. Find the area and the perimeter of the rectangle shown to the right.



The area of the rectangle is (1)

The perimeter of the rectangle is (2)

- (1) cubic meters. (2) cubic meters.
 square meters. square meters.
 meters. meters.

Answers 8

(1) square meters.

12

(2) meters.

15. One triple fudge brownie contains 149 calories. How many calories are in 4 triple fudge brownies?

calories

Answer: 596

16. The textbook for a course in biology costs \$98. There are 34 students in the class. Find the total cost of the biology books for the class.

The total cost is \$.

Answer: 3,332

17. Cabot Creamery is packing a pallet of 20-lb boxes of cheddar cheese to send to a local restaurant. There are six layers of boxes on the pallet, and each layer is five boxes wide by six boxes deep.
- How many boxes are in one layer?
 - How many boxes are on the pallet?
 - What is the weight of the cheese on the pallet?

-
- a. There are boxes in one layer.
- b. There are boxes on the pallet.
- c. The weight of the cheese on the pallet is lb.

Answers 30

180

3,600

-
18. A plot of land measures 70 feet by 170 feet. Find its area.

The area of the rectangle is (1)

- (1) feet.
 cubic feet.
 square feet.

Answers 11,900

(1) square feet.

-
19. A pixel is a rectangular dot on a graphing calculator screen. If a graphing calculator screen contains 66 pixels in a row and 92 pixels in a column, find the total number of pixels on a screen.

The total number of pixels on a screen is .

Answer: 6,072

-
20. One ounce of nuts contains 194 calories. How many calories are in 6 ounces of nuts?

calories

Answer: 1164

21. The Thespian club at a local community college is ordering T-shirts. T-shirts size S, M, or L cost \$11 each and T-shirts size XL or XXL cost \$14 each. Use the table on the right to find the total cost. (The first row is filled in for you.)

T-Shirt Size	Number of Shirts Ordered	Cost per Shirt	Cost per Size Ordered
S	4	\$11	\$44
M	5		
L	3		
XL	10		
XXL	4		

Total Cost _____

T-Shirt Size	Number of Shirts Ordered	Cost per Shirt	Cost per Size Ordered
S	4	\$11	\$44
M	5	\$	\$
L	3	\$	\$
XL	10	\$	\$
XXL	4	\$	\$

Total Cost\$

Answers 11

55

11

33

14

140

14

56

328

22. A plant for a tea company has bagging machines capable of bagging 3000 bags of tea per minute. If the plant runs 18 hours a day, how many tea bags are produced in one day?

The company produces tea bags in one day of operation.

Answer: 3,240,000

23. Divide the following and then check by multiplying.

$$8 \overline{) 368}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The quotient does not have a remainder. The quotient is _____.
- B. The quotient has a remainder not equal to 0. The quotient is _____ R _____.
- C. The quotient is undefined.

Answer: A. The quotient does not have a remainder. The quotient is .

24. Divide the following and then check by multiplying.

$$4 \overline{) 1990}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The quotient does not have a remainder. The quotient is _____.
- B. The quotient has a remainder not equal to 0. The quotient is _____ R _____.
- C. The quotient is undefined.

Answer: B. The quotient has a remainder not equal to 0. The quotient is R .

25. A truck hauls wheat to a storage granary. It carries a total of 7,836 bushels of wheat in 12 trips. How much does the truck haul each trip if each trip it hauls the same amount?

The truck hauls bushels each trip.

Answer: 653

26. Suppose the elevation of a peak on a certain planet is 21,120 feet. A mile is 5280 feet. How many miles tall is the peak?

The peak is miles tall.

Answer: 4

27. Find the average value of the following list of numbers.

10, 25, 52, 27, 11, 19

The average value is .

Answer: 24

28. Evaluate.

$$7^3$$

$$7^3 = \boxed{}$$

Answer: 343

29. Simplify.

$$20 + 8 \cdot 5$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. $20 + 8 \cdot 5 =$ _____

B. The expression is undefined.

Answer: A. $20 + 8 \cdot 5 =$

30. Simplify.

$$30 \div 6 \cdot 5 + 9$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. $30 \div 6 \cdot 5 + 9 =$ _____

B. The expression is undefined.

Answer: A. $30 \div 6 \cdot 5 + 9 =$

31. Simplify.

$$30 \div 5 - 6$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. $30 \div 5 - 6 =$ _____

B. The expression is undefined.

Answer: A. $30 \div 5 - 6 =$

32. Simplify.

$$37 + \frac{21}{3}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. $37 + \frac{21}{3} =$ _____

B. The expression is undefined.

Answer: A. $37 + \frac{21}{3} =$

33. Simplify.

$$2 \cdot 3 + 6 \cdot 7$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. $2 \cdot 3 + 6 \cdot 7 =$ _____

B. The expression is undefined.

Answer: A. $2 \cdot 3 + 6 \cdot 7 =$

34. Simplify.

$$(6 + 2) \cdot (5 - 2)$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. $(6 + 2) \cdot (5 - 2) =$ _____

B. The expression is undefined.

Answer: A. $(6 + 2) \cdot (5 - 2) =$

35. Simplify.

$$3^4 - [34 - (10 - 5)]$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. $3^4 - [34 - (10 - 5)] =$ _____

B. The expression is undefined.

Answer: A. $3^4 - [34 - (10 - 5)] =$

36. Evaluate the expression for $x = 2$ and $z = 3$.

$$6xz - 5x$$

$$6xz - 5x = \boxed{}$$

Answer: 26

37. Evaluate the algebraic expression for the given value.

$$x^2 - 5x + 6, \text{ for } x = 6$$

When $x = 6$, $x^2 - 5x + 6 = \boxed{}$.
(Simplify your answer.)

Answer: 12

38. Simplify.

$$2 + 8 \cdot 5 - 15$$

$$2 + 8 \cdot 5 - 15 = \boxed{}$$

Answer: 27

39. Solve. Check your solution.

$$x + 3 = 7$$

The solution is $x = \boxed{}$.

Answer: 4

40. Solve.

$$8x = 56$$

The solution is $x = \boxed{}$.

Answer: 7

41. Solve the equation. First combine any like terms on each side of the equation.

$$x - 5 = -3 + 4$$

The solution is $x = \boxed{}$.

Answer: 6

42. Solve the following equation.

$$2x - 2 = 0$$

x =

Answer: 1

43. Solve the equation.

$$5n + 15 = 55$$

n =

Answer: 8

44. Write a fraction to represent the shaded part of the syringe.



The fraction represented by the shaded parts is .

Answer: $\frac{5}{8}$

45. Find the prime factorization of the following number.

45

The prime factorization of 45 is .

Answer: $3^2 \cdot 5$

46. Find the prime factorization of the following number.

8

The prime factorization of 8 is .

Answer: 2^3

47. Write the prime factorization of 304.

The prime factorization of 304 is (1)

- (1) $2^5 \cdot 19$. $2 \cdot 3 \cdot 5 \cdot 7$.
 $2^4 \cdot 19$.
 $2^3 \cdot 19$.
 $2 \cdot 19$.

Answer: (1) $2^4 \cdot 19$.

48. Find the prime factorization of the following number.

70

The prime factorization of 70 is .

Answer: $2 \cdot 5 \cdot 7$

49. Divide $-\frac{11}{12} \div 22$. Write the quotient in simplest form.

$-\frac{11}{12} \div 22 =$ (Type an integer or a fraction.)

Answer: $-\frac{1}{24}$

50. Perform the indicated operation.

$$6 \div \frac{5}{14}$$

$6 \div \frac{5}{14} =$ (Simplify your answer.)

Answer: $\frac{84}{5}$

51. Perform the indicated operation.

$$\frac{1}{3} \div \frac{11}{6}$$

$$\frac{1}{3} \div \frac{11}{6} = \boxed{} \text{ (Type an integer or a simplified fraction.)}$$

Answer: $\frac{2}{11}$

52. Find $\frac{1}{4}$ of 40.

$$\frac{1}{4} \text{ of } 40 \text{ is } \boxed{}. \text{ (Simplify your answer. Type a whole number, fraction, or mixed number.)}$$

Answer: 10

53. Find $\frac{3}{5}$ of 30. Write the answer in simplest form.

$$\frac{3}{5} \text{ of } 30 \text{ is } \boxed{}. \text{ (Simplify your answer.)}$$

Answer: 18

54. Insert $<$, $>$, or $=$ between the pair of numbers to form a true statement.

$$4.597 \quad 4.6$$

$$4.597 \boxed{} 4.6$$

Answer: $<$

55. Write $<$, $>$, or $=$ between the pair of numbers to form a true statement.

$$0.33400 \quad 0.334$$

$$0.33400 \boxed{} 0.334$$

Answer: $=$

56. Round the decimal to the nearest tenth.

0.93

0.93 rounded to the nearest tenth is .

Answer: 0.9

57. Round 0.6088 to the nearest thousandth.

0.6088 \approx

Answer: 0.609

58. Round the monetary amount to the nearest dollar.

\$96.20

\$96.20 rounded to the nearest dollar is \$.

Answer: 96

59. Write as a decimal.

$3\frac{1}{100}$

$3\frac{1}{100} =$

Answer: 3.01

60. Add the following.

$8.4 + 8.21$

$8.4 + 8.21 =$ (Type an integer or a decimal.)

Answer: 16.61

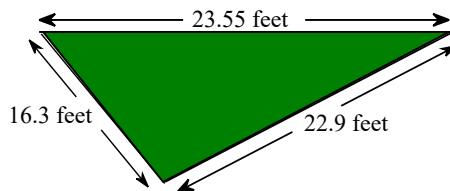
61. Subtract and check the following.

$15 - 3.3$

$15 - 3.3 =$ (Type an integer or a decimal.)

Answer: 11.7

62. A landscape architect is planning a border for a flower garden shaped like a triangle. The sides of the garden measure 16.3 feet, 23.55 feet, and 22.9 feet. Find the amount of border material needed.



The amount of border material needed is feet.
(Type an integer or a decimal.)

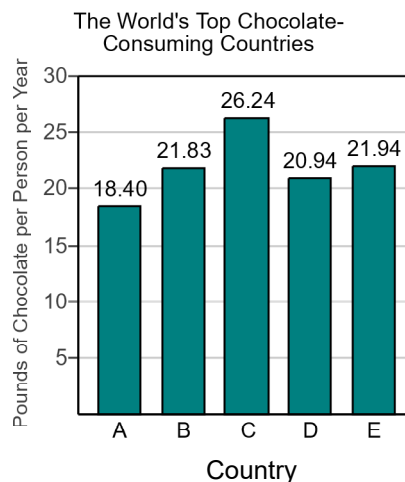
Answer: 62.75

63. The bar graph shows the top five chocolate-consuming nations in the world. Use this graph to answer the following.

Which country has the greatest chocolate consumption per person?

Choose the correct answer below.

- Country E
- Country B
- Country C
- Country D
- Country A



Answer: Country C

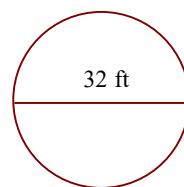
64. Use the values of the coins given below. Write the value of the group of coins shown to the right. To do so, it is usually easiest to start with the coin(s) of greatest value and end with the coin(s) of least value.



The total value of the group is \$.

Answer: 1.05

65. Find the circumference of the circle in terms of π . Then use the approximation 3.14 for π and approximate the circumference.



- a. Find the circumference of the circle in terms of π .

The exact circumference is ft.

- b. Find the circumference of the circle using 3.14 as an approximation for π .

The approximate circumference is ft. (Round to the nearest hundredth as needed.)

Answers 32π

100.48

66. A 1-ounce serving of cream cheese contains 6.8 grams of saturated fat. How much saturated fat is in 6 ounces of cream cheese?

g

Answer: 40.8

67. The screen of a portable digital device is a rectangle that measures 3.5 inches by 2.4 inches. Find the area of the screen.

The area is square inches. (Type an integer or a decimal.)

Answer: 8.4

68. The diameter of a ferris wheel is 280 feet. Find its circumference. Give an exact answer and an approximation using 3.14 for π .

The circumference is feet.

(Type an exact answer in terms of π .)

The circumference is approximately feet.

(Type an integer or a decimal. Round to the nearest hundredth as needed.)

Answers 280π

879.20

69. A meter is a unit of length approximately equal to 39.37 inches. If someone is 1.64 meters tall, what is his or her approximate height in inches?

Using the given conversion, someone who is 1.64 meters tall has a height of inches.
(Type an integer or a decimal.)

Answer: 64.5668

70. One year, farmers received an average of \$12.095 per bushel of wheat. How much did a farmer receive for selling 100 bushels of wheat?

The farmer received \$. (Round to the nearest cent as needed.)

Answer: 1209.50

71. Perform the indicated operation.

$$3.7 + 0.05$$

$3.7 + 0.05 =$ (Type an integer or a decimal.)

Answer: 3.75

72. Find the decimal equivalent of the following fraction.

$$\frac{11}{20}$$

$$\frac{11}{20} =$$

Answer: 0.55

73. Write as an equivalent decimal.

$$\frac{1}{4}$$

$$\frac{1}{4} =$$

Answer: 0.25

74. Write $2\frac{7}{20}$ as a decimal.

$$2\frac{7}{20} =$$

Answer: 2.35

75. Find the value of the following expression. Give the result as a decimal.

$$\frac{3}{5} - 3(7.3)$$

$$\frac{3}{5} - 3(7.3) = \boxed{} \text{ (Type an integer or a decimal.)}$$

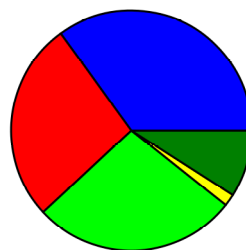
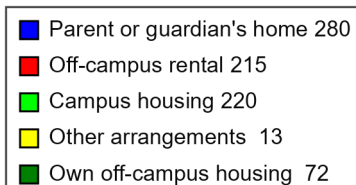
Answer: - 21.3

76.

The circle graph is a result of surveying 800 college students. They were asked where they live while attending college. Use this graph to find where most of these college students live.

Choose the correct answer below.

- A. Campus housing
- B. Other arrangements
- C. Off-campus rental
- D. Own off-campus housing
- E. Parent or guardian's home



Answer: E. Parent or guardian's home

77.

Find the square root.

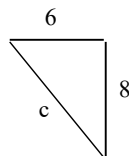
$$\sqrt{49}$$

Answer: 7

$$\sqrt{49} = \boxed{}$$

78.

Find the length of the third side of the right triangle.



The length of the third side is $\boxed{}$.

Answer: 10

79. Sketch the right triangle and find the length of the side not given. If necessary, approximate the length to the nearest thousandth.

$$\text{leg} = 3, \text{leg} = 4$$

What is the length of the side not given?

(Round to the nearest thousandth as needed.)

Answer: 5

80. Sketch the right triangle and find the length of the side not given.

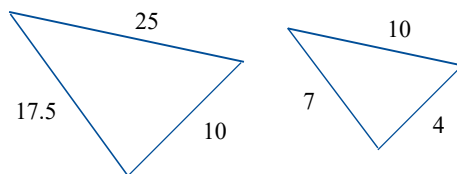
$$\text{leg} = 48, \text{hypotenuse} = 73$$

The unknown length is .

(Type an integer or decimal rounded to the nearest thousandth as needed.)

Answer: 55

81. Find the ratio of the corresponding sides of the given similar triangles.

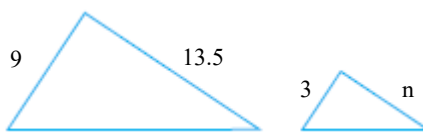


The ratio of the corresponding sides of the first triangle to the second triangle is .

(Type the ratio as a simplified fraction.)

Answer: $\frac{5}{2}$

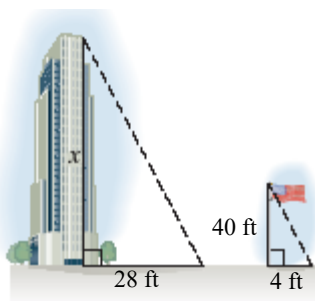
82. Given that the pair of triangles is similar, find the length of the side labeled n.



n =

Answer: 4.5

83. A triangle is formed by the building's height and shadow. Another triangle is formed by the flagpole's height and shadow. Using the following diagram, find the height of the building.

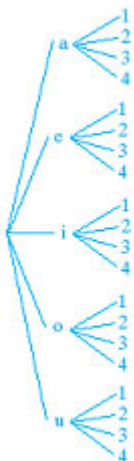


The height of the building is feet.

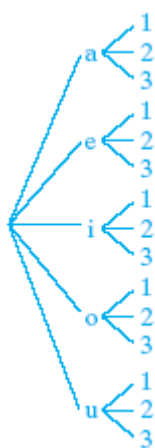
Answer: 280

84. Draw a tree diagram for choosing a vowel, (a, e, i, o, u) and then a number (1, 2 or 3). Use the diagram to find the number of possible outcomes.

A.



B.



C.

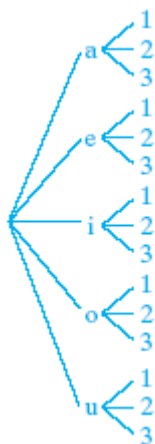


D.



Based on the tree, what is the number of possible outcomes?

Answers



B.

15

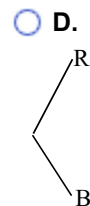
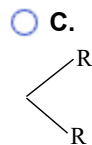
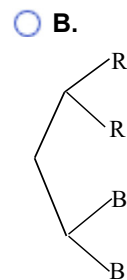
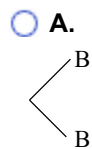
85. Draw a tree diagram for spinning Spinner B 1 time. Use the diagram to find the number of possible outcomes.



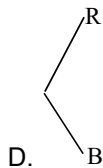
Spinner B

Based on the tree, what is the number of possible outcomes?

Choose the correct tree diagram below.



Answers



2

86. If a single 8-sided die is tossed once, find the probability of rolling a 1 or a 7.

The probability is . (Type an integer or a simplified fraction.)

Answer: $\frac{1}{4}$

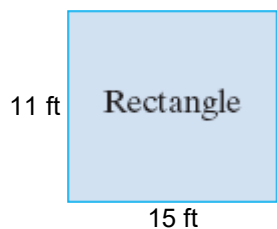
87. A marble is selected at random from a jar containing 5 red marbles, 2 yellow marbles, and 6 green marbles.

What is the probability that the marble is red?

The probability that the marble is red is . (Type an integer or a simplified fraction.)

Answer: $\frac{5}{13}$

88. Find the perimeter of the following figure.



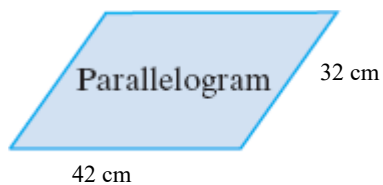
Perimeter = (1)

- (1) ft
 sq. ft

Answers 52

(1) ft

89. Find the perimeter of the following figure.



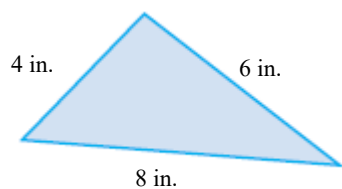
Perimeter = (1)

- (1) sq. cm
 cm

Answers 148

(1) cm

90. Find the perimeter of the following figure.



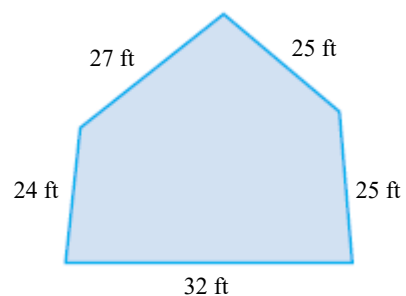
The perimeter is (1)

- (1) sq. in.
 in.

Answers 18

(1) in.

91. Find the perimeter of the figure shown to the right.



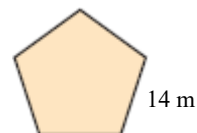
Perimeter = (1)

- (1) sq. ft.
 ft.

Answers 133

(1) ft.

92. Find the perimeter of the regular polygon shown to the right.



Perimeter = (1)

- (1) sq m
 m

Answers 70

(1) m

93. A computer has shape of a rectangular solid. Find the volume of the computer, with dimensions of 4 inches by 4 inches by 4.4 inches.

The volume of the computer is (1)

(Simplify your answer. Type an integer or a decimal.)

- (1) sq in.
 cu in.
 in.

Answers 70.4

(1) cu in.

94. Insert $<$, $>$, or $=$ in the space between the paired numbers to make the statement true.

2 ___ 5

2 (1) 5

- (1) $<$
 $>$
 $=$

Answer: (1) $<$

95. Insert $<$, $>$, or $=$ in the space between the paired numbers to make the statement true.

7 ___ 5

7 5

Answer: $>$

96. Use the commutative and associative properties to simplify the expression.

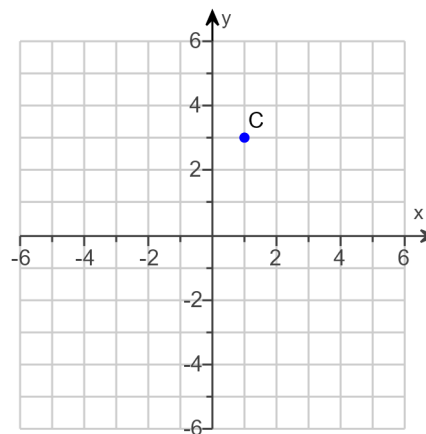
$(16 + a) + 16$

$(16 + a) + 16 =$

Answer: $a + 32$

97. Find the x- and y-coordinates of the point C.

The coordinates of C are .
(Type an ordered pair.)



Answer: (1,3)

98. Determine whether each ordered pair is a solution of the given linear equation.

$$4x + 3y = 18; (3,3), (6,0), (0,6)$$

Is (3,3) a solution to the given linear equation?

- No
 Yes

Is (6,0) a solution to the given linear equation?

- Yes
 No

Is (0,6) a solution to the given linear equation?

- Yes
 No

Answers No

No

Yes

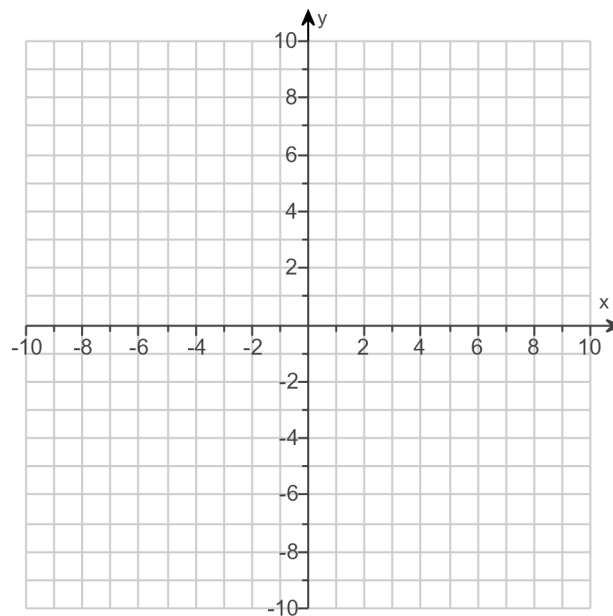
99. For the equation, find three ordered pair solutions by completing the table. Then use any two of the ordered pairs to graph the equation.

$$y = \frac{1}{2}x$$

Complete the table below.

x	y
0	<input type="text"/>
2	<input type="text"/>
-2	<input type="text"/>

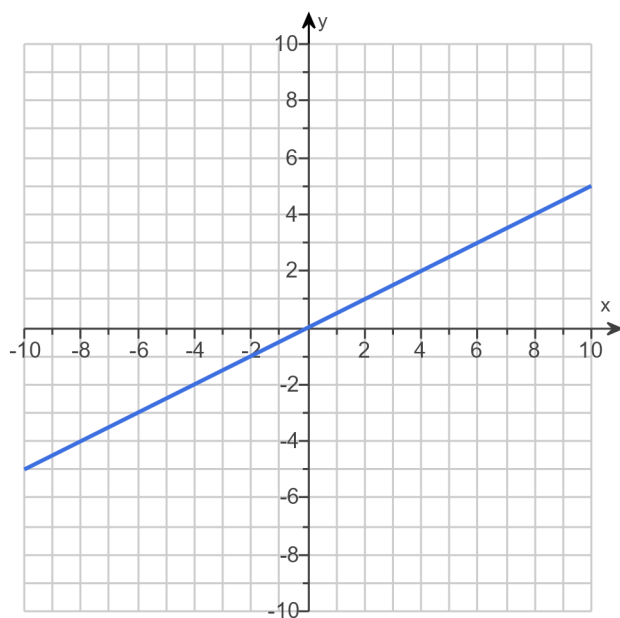
Use the graphing tool to graph the equation.



Answers 0

1

-1

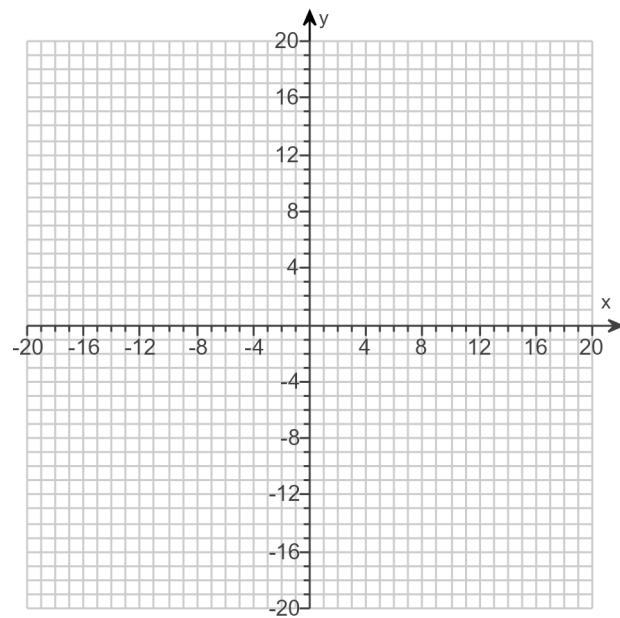


100.

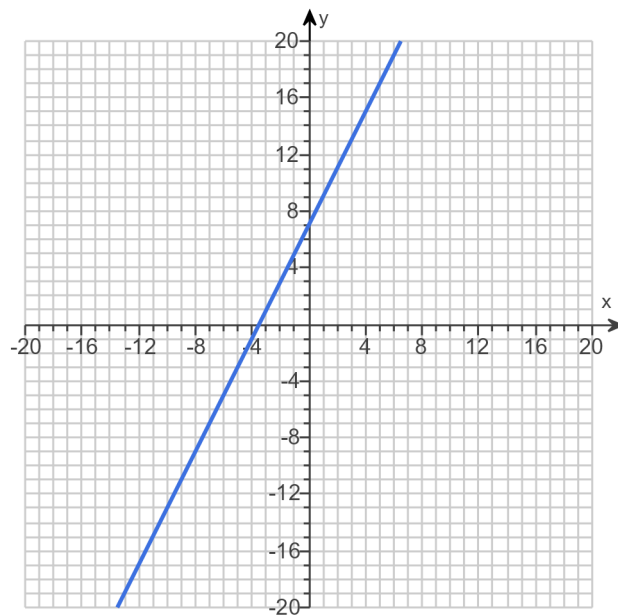
Graph the equation.

$$y = 2x + 7$$

Use the graphing tool to graph the line.



Answer:

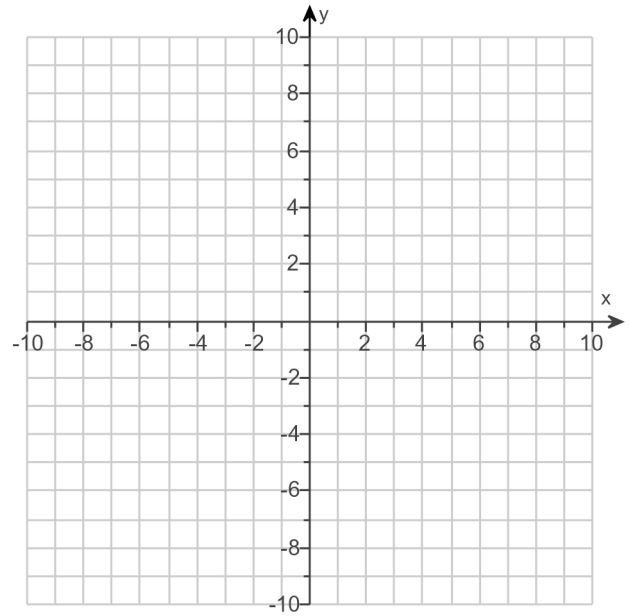


101.

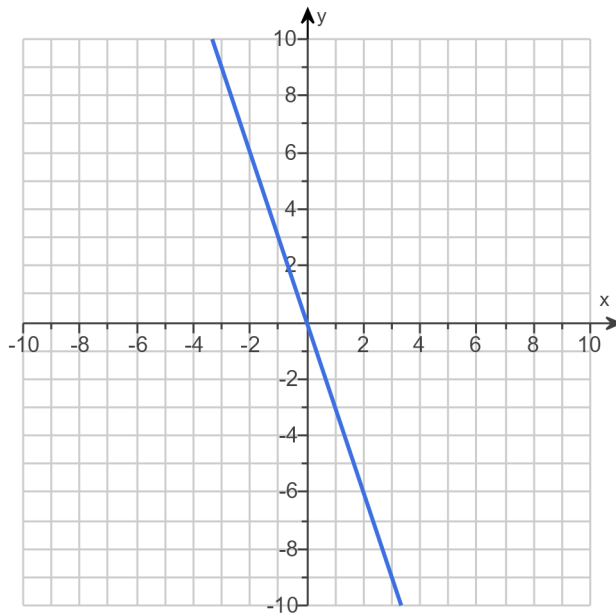
Graph the linear equation.

$$y = -3x$$

Use the graphing tool to graph the linear equation.



Answer:



102. Given the following function, find $f(-2)$, $f(0)$, and $f(1)$.

$$f(x) = 5x - 5$$

$$f(-2) = \boxed{}$$

$$f(0) = \boxed{}$$

$$f(1) = \boxed{}$$

Answers - 15

- 5

0

103. Given the function $f(x) = 5x + 7$, find the indicated values.

(a) $f(6)$

(b) $f(a)$

(a) $f(6) = \boxed{}$ (Simplify your answer.)

(b) $f(a) = \boxed{}$ (Simplify your answer.)

Answers 37

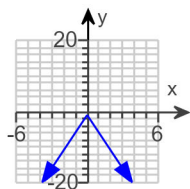
$5a + 7$

104. Graph the function.

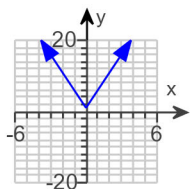
$$f(x) = 5x - 1$$

Choose the correct graph below.

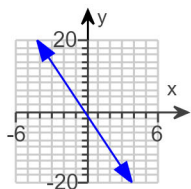
A.



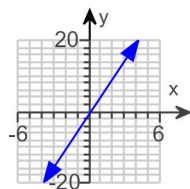
B.



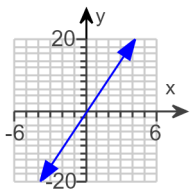
C.



D.

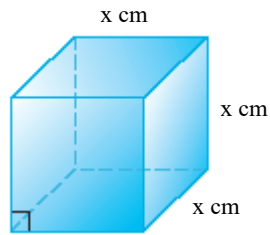


Answer:



D.

105. The function $V(x) = x^3$ may be used to find the volume of a cube with side length x . Find the volume of a cube whose side is 12 centimeters.



The volume is cubic centimeters. (Type an integer or a decimal.)

Answer: 1728