

**Student:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

**Instructor:** Alfredo Alvarez  
**Course:** Math 0410 / 0320 Alvarez

**Assignment:**  
MATH3RDGRADEWARM145PMR

1. Determine the place value of the digit 7 in the whole number 5376.

Choose the correct answer below.

- hundreds  
 thousands  
 ones  
 tens

Answer: tens

2. Write the whole number in expanded form.

9240

9240 =  (Type your answer using plus signs.)

Answer:  $9000 + 200 + 40$

3. The table shows the number of calories burned during 30 minutes of exercise and how the number of calories burned varies according to the weight of the person doing the exercise. For a person weighing 140 pounds, how many calories will be burned during 30 minutes of aerobic dance?

Activity	120 lb	140 lb
Moderate jogging	342	399
Moderate walking	120	140
Moderate cycling	148	172
Aerobic dance	218	255
Racquetball	224	262
Tennis	167	195

calories

Answer: 255

4. The table shows the number of calories burned during 30 minutes of exercise and how the number of calories burned varies according to the weight of the person doing the exercise. For a person weighing 140 pounds, which activity burns the most calories?

Activity	100 lb	140 lb
Moderate jogging	294	412
Moderate walking	100	140
Moderate cycling	127	178
Aerobic dance	176	246
Racquetball	195	273
Tennis	138	193

Choose the correct answer below

- A. Racquetball  
 B. Moderate cycling  
 C. Moderate walking  
 D. Tennis  
 E. Moderate jogging  
 F. Aerobic dance

Answer: E. Moderate jogging

5. The table shows the five longest rivers in the world. Use the table to determine which river is the longest in the world.

River	Miles
Chang jiang-Yangtze (China)	3964
Amazon (Brazil)	4000
Tenisei-Angara (Russia)	3442
Mississippi-Missouri (U.S.)	3740
Nile (Egypt)	4145

Which river is the longest in the world?

- Nile  
 Amazon  
 Tenisei-Angara  
 Mississippi-Missouri  
 Chang jiang-Yangtze

Answer: Nile

6. The table shows the top ten popular breeds of dogs. Use the table to answer the following question.

Which breed has a greater average weight, the Golden retriever or the Labrador retriever?

The (1)  has a greater average weight.

Top Ten Popular Breeds of Dogs

Breed	Average Dog Maximum Height (in inches)	Average Dog Maximum Weight (in pounds)
Labrador retriever	25	75
German shepherd	26	95
Golden retriever	24	80
Beagle	15	30
Bulldog	26	90
Yorkshire terrier	9	7
Boxer	25	70
Poodle	standard: 26	standard: 70
Rottweiler	26	none given
Dachshund	9	25

- (1)  Labrador retriever  
 Golden retriever

Answer: (1) Golden retriever

7. Add.

$$\begin{array}{r} 16 \\ + 973 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ + 973 \\ \hline \end{array}$$

Answer: 989

8. Add.

$$\begin{array}{r} 14 \\ 13 \\ + 41 \\ \hline \end{array}$$

The sum is .

Answer: 68

9. Subtract.

$$\begin{array}{r} 63 \\ - 47 \\ \hline \end{array}$$

The difference is .

Answer: 16

10. Subtract.

$$\begin{array}{r} 700 \\ - 584 \\ \hline \end{array}$$

The difference is .

Answer: 116

11. Subtract. Check by adding.

$$\begin{array}{r} 473 \\ - 69 \\ \hline \end{array}$$

The difference is .

Answer: 404

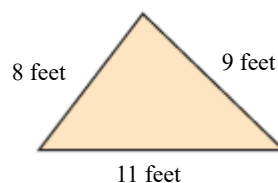
12. Subtract.

$$25 - 16$$

The answer is .

Answer: 9

13. Find the perimeter of the figure.



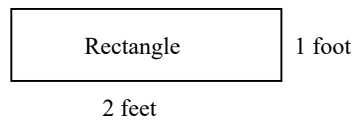
The perimeter is  feet.

Answer: 28

14. Find the perimeter of the figure.

ft

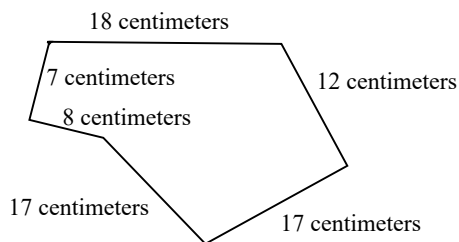
Answer: 6



15. Find the perimeter of the figure.

cm

Answer: 79



16. Find the total of 89, 29, 3, 17, and 275.

The total is .

Answer: 413

17. Find the difference of 92 and 77.

The difference is .

Answer: 15

18. What is 365 increased by 80?

365 increased by 80 is .

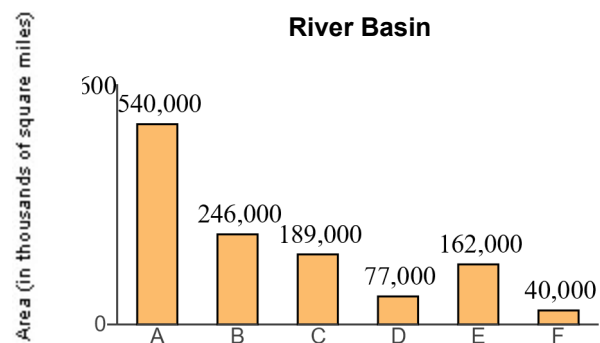
Answer: 445

19. A new notebook computer with DVD player costs \$510. Derik Muller has \$1107 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: 597

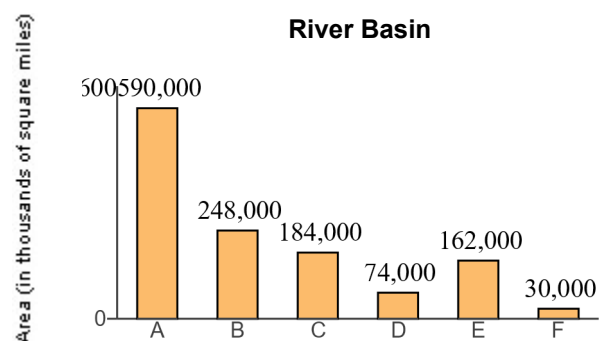
20. Find the total land area drained by the C and D sub-basins.



sq mi

Answer: 266,000

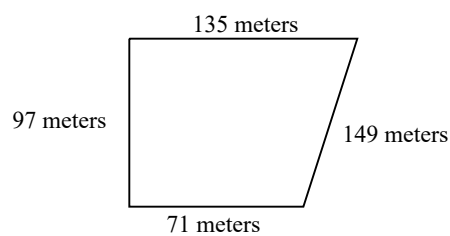
21. How many more square miles of land is drained by the A sub-basin than the B sub-basin?



sq mi

Answer: 342,000

22. 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: 452

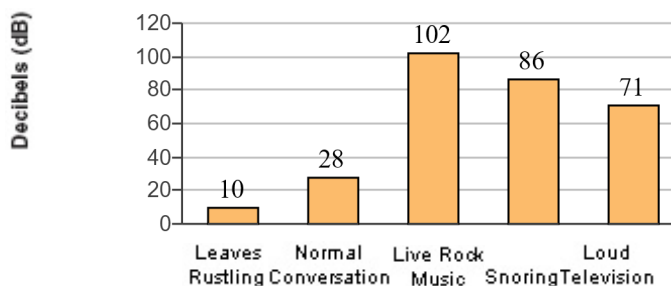
23. Evelyn Abrams is reading an 845-page book. If she has just finished reading page 693, how many more pages must she read to finish the book?

pages

Answer: 152

24. What is the dB rating for live rock music?

**Decibel Levels for Common Sounds**

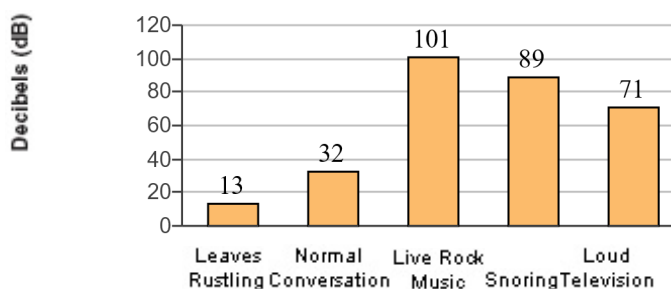


dB

Answer: 102

25. How much louder is the sound of snoring than normal conversation?

**Decibel Levels for Common Sounds**



dB

Answer: 57

26. A permanent game board is made of granite. It is in the shape of a square with side lengths of 34 ft. Find the perimeter of the square playing board.

The perimeter is  feet.

Answer: 136

27. 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?

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

State	Number of Stores
Arizona	27
California	63
Florida	82
Georgia	91
Illinois	144
New York	48
Michigan	193
Minnesota	29
Ohio	76
Texas	58

Answer: 428

28. A particular state has 2059 miles of urban highways and 3838 miles of rural highways. Find the total highway mileage in the state.

The total highway mileage in the state is  miles.

Answer: 5897

29. Round 9,768 to the nearest hundred.

The number 9,768 rounded to the nearest hundred is .

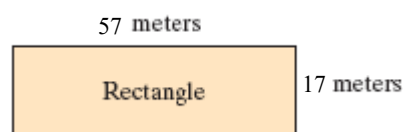
Answer: 9,800

30. Round 55,227 to the nearest thousand.

55,227 rounded to the nearest thousand is .

Answer: 55,000

31. Estimate the perimeter of the rectangle by first rounding the length of each side to the nearest ten.



The estimated perimeter is  meters.

Answer: 160

32. Multiply.

$$\begin{array}{r} 76 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 76 \\ \times 9 \\ \hline \hline \end{array}$$

Answer: 684

33. Multiply.

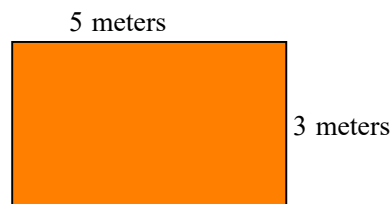
$$\begin{array}{r} 67 \\ \times 75 \\ \hline \end{array}$$

The product is .

Answer: 5025



34. 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.  
 meters.                       meters.  
 square meters.               square meters.

Answers 15

(1) square meters.

16

(2) meters.

35. One triple fudge brownie contains 171 calories. How many calories are in 10 triple fudge brownies?

calories

Answer: 1710

36. The textbook for a course in biology costs \$97. There are 36 students in the class. Find the total cost of the biology books for the class.

The total cost is \$ .

Answer: 3,492

37. A plot of land measures 90 feet by 130 feet. Find its area.

The area of the rectangle is  (1)

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

Answers 11,700

(1) square feet.

38. One ounce of nuts contains 215 calories. How many calories are in 9 ounces of nuts?

calories

Antwort: 1935

39. A plant for a tea company has bagging machines capable of bagging 3000 bags of tea per minute. If the plant runs 19 hours a day, how many tea bags are produced in one day?

The company produces  tea bags in one day of operation.

Answer: 3,420,000

40. Divide the following and then check by multiplying.

$$5 \overline{)320}$$

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 .

41. Divide the following and then check by multiplying.

$$3 \overline{)269}$$

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 .

42. For their wedding, Ben and Jen paid \$11 for each guest's dinner. The total bill was \$1606. How many guests did they have at their wedding?

guests

Answer: 146

43. A truck hauls wheat to a storage granary. It carries a total of 6,370 bushels of wheat in 14 trips. How much does the truck haul each trip if each trip it hauls the same amount?

The truck hauls  bushels each trip.

Answer: 455

44. 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

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

10, 24, 27, 25, 11, 17

The average value is .

Answer: 19

46. Evaluate.

$$3^3$$

$$3^3 = \text{$$

Answer: 27

47. Simplify.

$$27 + 9 \cdot 7$$

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

- A.  $27 + 9 \cdot 7 =$  \_\_\_\_\_
- B. The expression is undefined.

Answer: A.  $27 + 9 \cdot 7 =$

48. Simplify.

$$42 \div 7 - 6$$

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

A.  $42 \div 7 - 6 =$  \_\_\_\_\_

B. The expression is undefined.

Answer: A.  $42 \div 7 - 6 =$

49. Simplify.

$$50 + \frac{15}{3}$$

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

A.  $50 + \frac{15}{3} =$  \_\_\_\_\_

B. The expression is undefined.

Answer: A.  $50 + \frac{15}{3} =$

50. Simplify.

$$8 \cdot 8 + 6 \cdot 7$$

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

A.  $8 \cdot 8 + 6 \cdot 7 =$  \_\_\_\_\_

B. The expression is undefined.

Answer: A.  $8 \cdot 8 + 6 \cdot 7 =$

51. Simplify.

$$(2 + 5) \cdot (10 - 4)$$

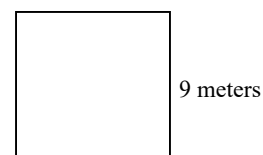
Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A.  $(2 + 5) \cdot (10 - 4) =$  \_\_\_\_\_

B. The expression is undefined.

Answer: A.  $(2 + 5) \cdot (10 - 4) =$

52. Find the area and perimeter of the square shown to the right.



The area of the square is  (1)

The perimeter of the square is  (2)

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

Answers 81

(1) square meters.

36

(2) meters.

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

$$3xz - 4x$$

$$3xz - 4x = \text{$$

Answer: 10

54. Evaluate the expression for  $x = 3$  and  $y = 4$ .

$$\frac{3y - 6}{x}$$

$$\frac{3y - 6}{x} = \text{$$

Answer: 2

55. Evaluate the expression for  $x = 11$ ,  $y = 3$ , and  $z = 4$ .

$$\frac{x + 3y}{z}$$

$$\frac{x + 3y}{z} = \text{$$

Answer: 5

56. Evaluate the algebraic expression for the given value.

$$x^2 - 3x + 5, \text{ for } x = 4$$

When  $x = 4$ ,  $x^2 - 3x + 5 =$  .  
(Simplify your answer.)

Answer: 9

57. Evaluate the following expression for  $x = 1$  and  $y = 2$ .

$$\frac{6x + 2y}{2x}$$

The answer is .

Answer: 5

58. Determine which numbers in the set are solutions of the equation.

$$n - 5 = 12; \{15, 17, 19\}$$

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

- A. \_\_\_\_\_ in the set  $\{15, 17, 19\}$  is a solution of the equation  $n - 5 = 12$ .  
 B. None of the numbers in the set are solutions of the equation

Answer: A.  in the set  $\{15, 17, 19\}$  is a solution of the equation  $n - 5 = 12$ .

59. Simplify.

$$6 + 9 \cdot 3 - 11$$

$$6 + 9 \cdot 3 - 11 =$$

Answer: 22

60. Solve. Check your solution.

$$x + 6 = 23$$

The solution is  $x =$  .

Answer: 17

61. Solve.

$$2x = 4$$

The solution is  $x =$  .

Answer: 2

62. Solve the following equation.

$$2x - 2 = 0$$

$x =$

Answer: 1

63. Solve the equation.

$$5n + 50 = 55$$

$n =$

Answer: 1

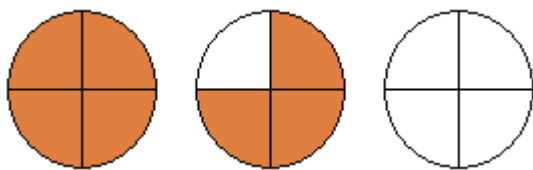
64. Write a fraction to represent the shaded region of the figure.



A fraction which represents the figure is .

Answer:  $\frac{2}{7}$

65. Represent the shaded part of the group of circles with  
**A.** an improper fraction and  
**B.** a mixed number.

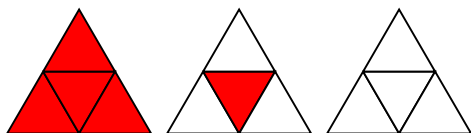


- A.** The improper fraction which represents the shaded area of the figure group is .
- B.** The mixed number which represents the shaded area of the figure group is .

Answers  $\frac{7}{4}$

$1\frac{3}{4}$

66. Represent the shaded part of the group of triangles with  
**A.** an improper fraction and  
**B.** a mixed number.

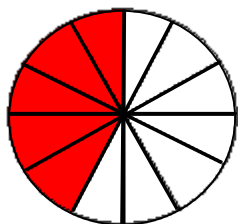


- A.** The improper fraction that represents the shaded area of the figure group is .
- B.** The mixed number that represents the shaded area of the figure group is .

Answers  $\frac{5}{4}$

$1\frac{1}{4}$

67. Write a fraction to represent the shaded region of the figure.

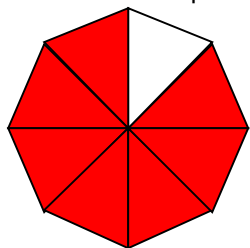


The fraction which represents the shaded region is .

Answer:  $\frac{5}{12}$



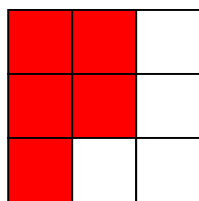
68. Write a fraction to represent the shaded part of the figure.



The fraction representing the shaded part is .

Answer:  $\frac{7}{8}$

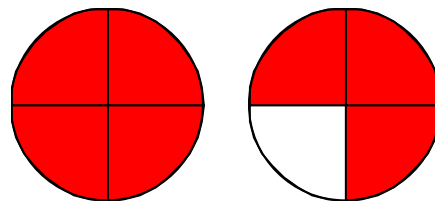
69. Write a fraction to represent the shaded region of the figure.



Answer:  $\frac{7}{9}$

The fraction that represents the shaded region of this figure is .

70. Represent the shaded part of the group of figures with (a) an improper fraction and (b) a mixed number.



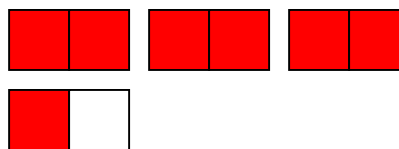
(a) Write the shaded area as an improper fraction.

(b) Write the shaded area as a mixed number.

Answers  $\frac{7}{4}$

$1\frac{3}{4}$

71. Represent the shaded part of the group of figures with **(a)** an improper fraction and **(b)** a mixed number.



- a. Write the shaded area as an improper fraction.

- b. Write the shaded area as a mixed number.

Answers  $\frac{7}{2}$

$3\frac{1}{2}$

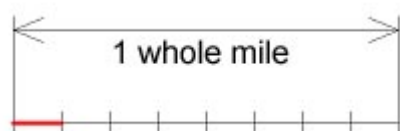
72. Write a fraction to represent the shaded part of the syringe.



The fraction represented by the shaded parts is .

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

73. Write a fraction to represent the shaded part of the distance.



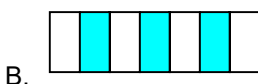
The fraction that represents the shaded part is .

Answer:  $\frac{1}{8}$

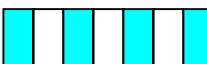
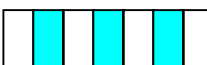


74. Each of the objects shown to the right is divided into equal sections and part of each object is shaded. The shaded part is a fraction of the whole object.

Which object represents the fraction  $\frac{3}{7}$ ?

Answer:



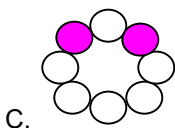
Choose the correct answer below.

- A. 
- B. 
- C. 
- D. 
- E. None of the above.

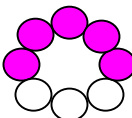
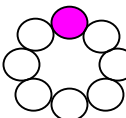
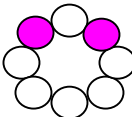
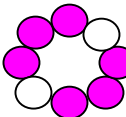
75. Each of the objects shown to the right is divided into equal sections and part of each object is shaded. The shaded part is a fraction of the whole object.

Which object represents the fraction  $\frac{2}{8}$ ?

Answer:







Choose the correct answer below.


- A. 
- B. 
- C. 
- D. 
- E. None of the above.

76. Each of the figures shown to the right is divided into equal sections, and part of each figure is shaded. The shaded part is a fraction of the whole figure.

Which figure represents the fraction  $\frac{8}{8}$ ?

Choose the correct answer below.

- A. 
- B. 
- C. 
- D. 
- E. None of the above.

Answer:  A.

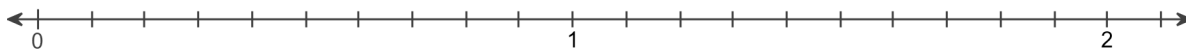
77. In an American Sign Language (A.S.L) class of 16 students, 15 are hearing impaired. What fraction of the students are hearing impaired?

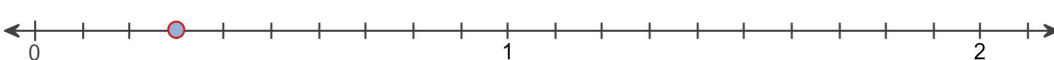
The fraction of the students that are hearing impaired is .

Answer:  $\frac{15}{16}$

78. Graph the fraction on a number line.

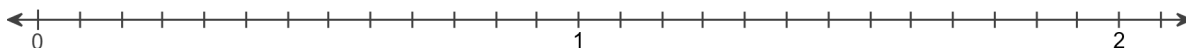
$$\frac{3}{10}$$

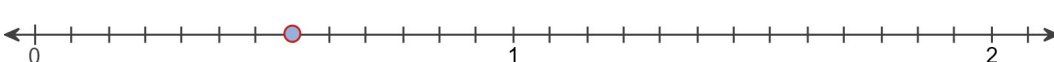


Answer: 

79. Graph the fraction on a number line.

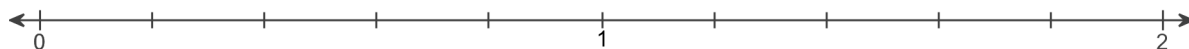
$$\frac{7}{13}$$



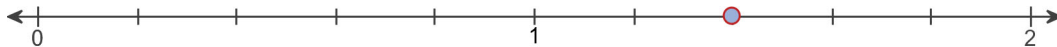
Answer: 

80. Graph the fraction on a number line.

$$\frac{7}{5}$$



Answer:



81. Find the prime factorization of the following number.

56

The prime factorization of 56 is .Answer:  $2^3 \cdot 7$ 

82. Find the prime factorization of the following number.

195

The prime factorization of 195 is .Answer:  $3 \cdot 5 \cdot 13$ 

83. Write the fraction in lowest terms.

$$\frac{42}{54}$$

$$\frac{42}{54} = \text{}$$

Answer:  $\frac{7}{9}$ 

84. Perform the indicated operation.

$$4 \div \frac{7}{13}$$

$$4 \div \frac{7}{13} = \text{} \text{ (Simplify your answer.)}$$

Answer:  $\frac{52}{7}$

85. Perform the indicated operation.

$$\frac{3}{11} \div \frac{13}{33}$$

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$$\frac{3}{11} \div \frac{13}{33} = \boxed{\phantom{000}} \text{ (Type an integer or a simplified fraction.)}$$

Answer:  $\frac{9}{13}$

86. Find  $\frac{1}{5}$  of 120.

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$$\frac{1}{5} \text{ of } 120 \text{ is } \boxed{\phantom{000}}. \text{ (Simplify your answer. Type a whole number, fraction, or mixed number.)}$$

Answer: 24

87. Find  $\frac{3}{8}$  of 48. Write the answer in simplest form.

---

$$\frac{3}{8} \text{ of } 48 \text{ is } \boxed{\phantom{000}}. \text{ (Simplify your answer.)}$$

Answer: 18

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

$$5.398 \quad 5.4$$

---

$$5.398 \boxed{\phantom{000}} 5.4$$

Answer:  $<$

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

$$0.338 \quad 0.33800$$

---

$$0.338 \boxed{\phantom{000}} 0.33800$$

Answer:  $=$

90. Round the decimal to the nearest tenth.

0.68

0.68 rounded to the nearest tenth is .

Answer: 0.7

91. Round 0.6076 to the nearest thousandth.

0.6076  $\approx$

Answer: 0.608

92. Round the monetary amount to the nearest dollar.

\$28.36

\$28.36 rounded to the nearest dollar is \$ .

Answer: 28

93. Write as a decimal.

$9\frac{3}{100}$

$9\frac{3}{100} =$

Answer: 9.03

94. Add the following.

$2.4 + 6.15$

$2.4 + 6.15 =$   (Type an integer or a decimal.)

Answer: 8.55

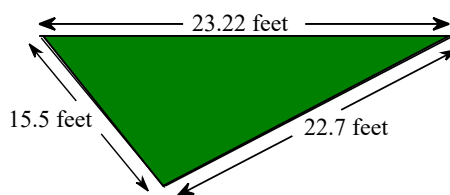
95. Subtract and check the following.

$15 - 1.3$

$15 - 1.3 =$   (Type an integer or a decimal.)

Answer: 13.7

96. A landscape architect is planning a border for a flower garden shaped like a triangle. The sides of the garden measure 15.5 feet, 23.22 feet, and 22.7 feet. Find the amount of border material needed.



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

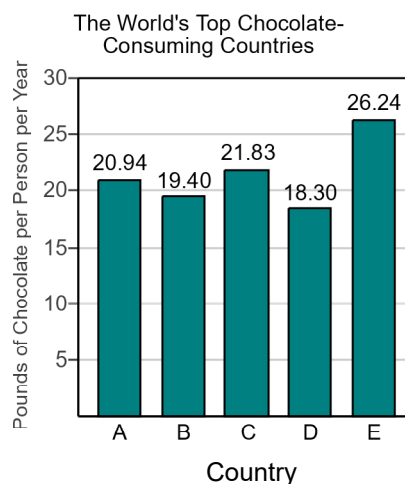
Answer: 61.42

97. 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 A
- Country C
- Country D
- Country B



Answer: Country E

98. 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: 1.45



99. Use the values of the coins given to the right. Name the different ways that coins can have a value of \$0.18 given that you may use no more than 10 coins.



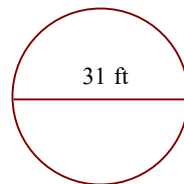
Choose the correct answer below. Select all that apply.

- A. 3 nickels and 3 pennies
- B. 2 nickels and 8 pennies
- C. 1 dime, 1 nickel and 3 pennies
- D. 3 nickels and 5 pennies
- E. 1 dime, 2 nickels and 4 pennies
- F. 1 dime and 8 pennies

Answer: A. 3 nickels and 3 pennies, B. 2 nickels and 8 pennies, C. 1 dime, 1 nickel and 3 pennies, F. 1 dime and 8 pennies

100.

Find the circumference of the circle in terms of  $\pi$ . Then use the approximation 3.14 for  $\pi$  and approximate the circumference.



- a. Find the circumference of the circle in terms of  $\pi$ .

The exact circumference is  ft.

- b. Find the circumference of the circle using 3.14 as an approximation for  $\pi$ .

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

Answers  $31\pi$

97.34

101. A 1-ounce serving of cream cheese contains 7.9 grams of saturated fat. How much saturated fat is in 15 ounces of cream cheese?

g

Answer: 118.5

102. The screen of a portable digital device is a rectangle that measures 3.5 inches by 2.6 inches. Find the area of the screen.

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

Answer: 9.1

103. A meter is a unit of length approximately equal to 39.37 inches. If someone is 1.61 meters tall, what is his or her approximate height in inches?

Using the given conversion, someone who is 1.61 meters tall has a height of  inches.  
(Type an integer or a decimal.)

Answer: 63.3857

104. One year, farmers received an average of \$13.165 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: 1316.50

105. Perform the indicated operation.

$$5.8 + 0.01$$

$5.8 + 0.01 =$   (Type an integer or a decimal.)

Answer: 5.81

106. Find the decimal equivalent of the following fraction.

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

$\frac{11}{20} =$

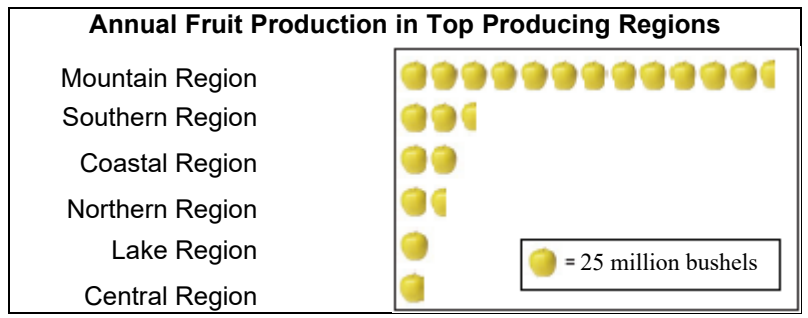
Answer: 0.55

107. Write  $2\frac{3}{20}$  as a decimal.

$2\frac{3}{20} =$

Answer: 2.15

108. The pictograph shows last year's fruit production by the top fruit-producing regions. Which region produced the greatest quantity of fruit?



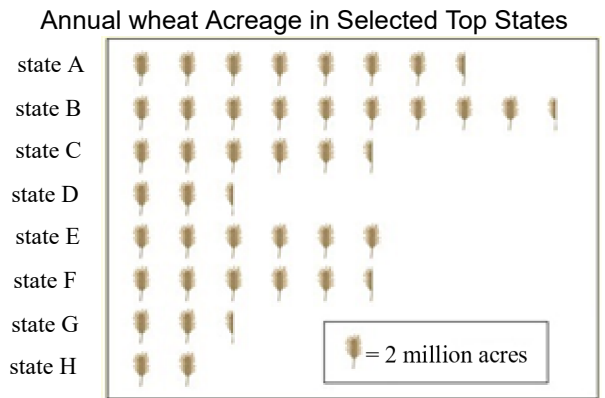
Which region produced the greatest quantity of fruit?

- A. The coastal region
- B. The mountain region
- C. The southern region
- D. The central region
- E. The lake region
- F. The northern region

Answer: B. The mountain region

109. The pictograph on the right shows the number of acres devoted to wheat production in the selected states.

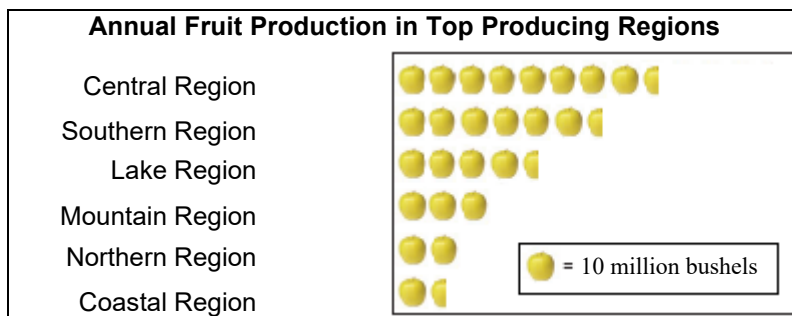
Approximate the number of acres of wheat planted in state H.



The number of acres of wheat planted in state H is approximately  million acres.  
(Type an integer or a decimal.)

Answer: 4

110. The pictograph shows last year's fruit production by the top fruit-producing regions. Which region produces about 85 million bushels of fruit?



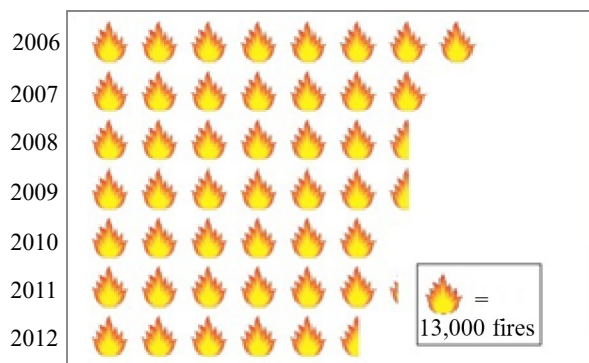
Choose the correct answer below.

- A. The coastal region
- B. The southern region
- C. The mountain region
- D. The central region
- E. The northern region
- F. The lake region

Answer: D. The central region

111. The pictograph on the right shows the average number of wildfires in a country between 2006 and 2012.

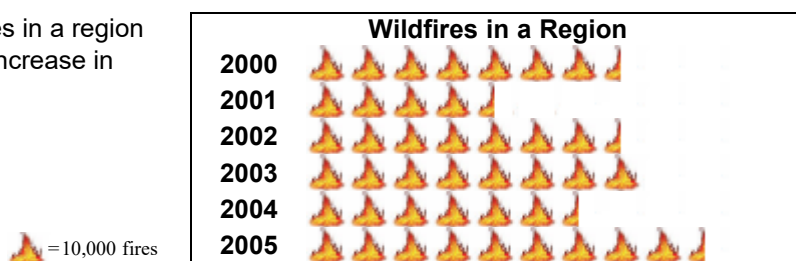
Approximate the number of wildfires in 2007.



The number of wildfires in the year 2007 is approximately .  
(Type an integer or a decimal.)

Answer: 91,000

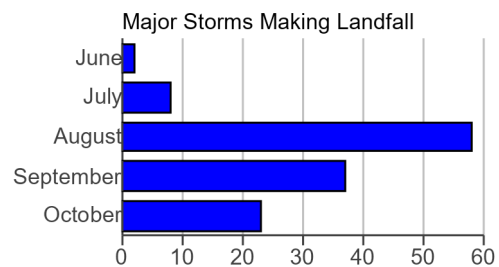
112. The pictograph shows the annual number of wildfires in a region between 2000 and 2005. What was the amount of increase in wildfires from 2004 to 2005?



The number of wildfires in the region increased by about  from 2004 to 2005.

Answer: 30,000

113. The bar graph shows the number of major storms, by month, that have made landfall in a region between 1851 and 2005. In which month did the most major storms make landfall in the region?



In which month did the most major storms make landfall in the region?

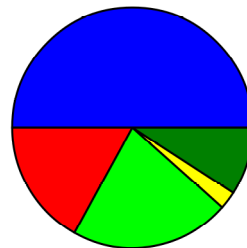
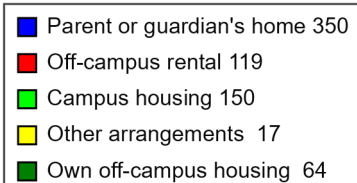
- September
   
  July  
 June
   
  August  
 October
   
  Cannot be determined

Answer: August

114. The circle graph is a result of surveying 700 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. Parent or guardian's home  
 B. Other arrangements  
 C. Own off-campus housing  
 D. Off-campus rental  
 E. Campus housing



Answer: A. Parent or guardian's home

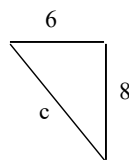
115. Find the square root.

$$\sqrt{64}$$

Answer: 8

$$\sqrt{64} = \boxed{\phantom{00}}$$

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



The length of the third side is .

Answer: 10

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

leg = 16, leg = 12

What is the length of the side not given?

(Round to the nearest thousandth as needed.)

Answer: 20

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

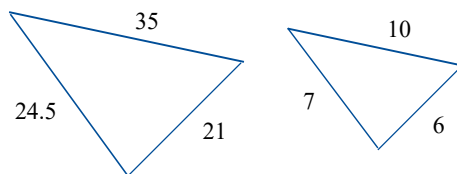
leg = 12, hypotenuse = 37

The unknown length is .

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

Answer: 35

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

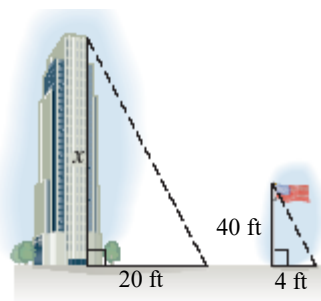


The ratio of the corresponding sides of the first triangle to the second triangle is .

(Type the ratio as a simplified fraction.)

Answer:  $\frac{7}{2}$

120. 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.

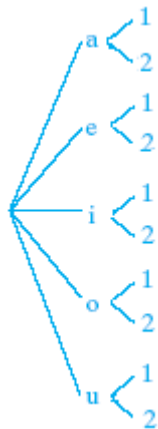


The height of the building is  feet.

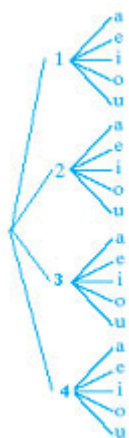
Answer: 200

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

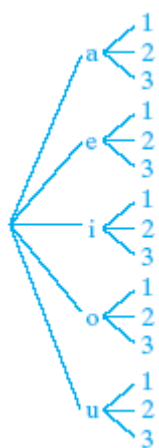
A.



B.



C.

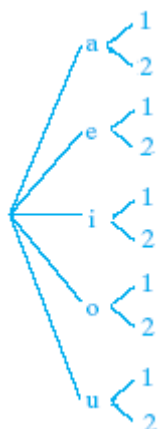


D.



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

Answers

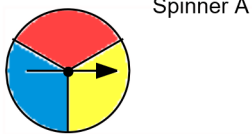


A.

10

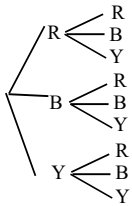
122.

Draw a tree diagram for spinning Spinner A 2 times. Use the diagram to find the number of possible outcomes.



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

Answers

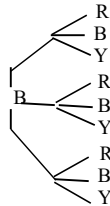


C.

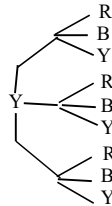
9

Choose the correct tree diagram below.

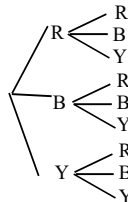
A.



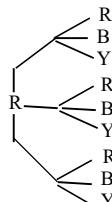
B.



C.



D.



123. A marble is selected at random from a jar containing 3 red marbles, 6 yellow marbles, and 4 green marbles.

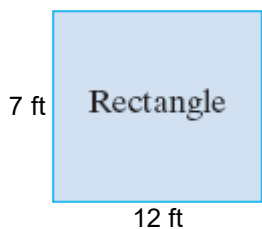
What is the probability that the marble is red?

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

Answer:  $\frac{3}{13}$



124. Find the perimeter of the following figure.



---

Perimeter =  (1)

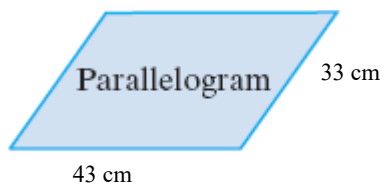
- (1)  ft  
 sq. ft

Answers 38

(1) ft

---

125. Find the perimeter of the following figure.



---

Perimeter =  (1)

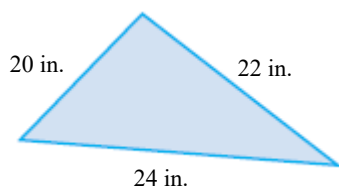
- (1)  cm  
 sq. cm

Answers 152

(1) cm

---

126. Find the perimeter of the following figure.



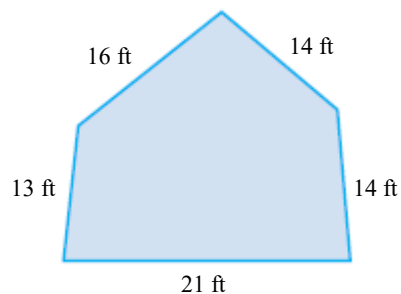
The perimeter is  (1)

- (1)  sq. in.  
 in.

Answers 66

(1) in.

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



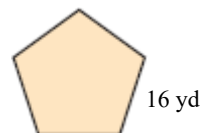
Perimeter =  (1)

- (1)  sq. ft.  
 ft.

Answers 78

(1) ft.

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



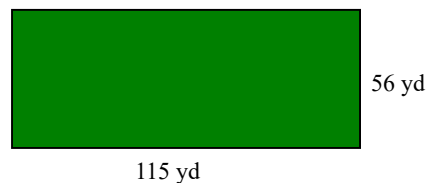
Perimeter =  (1)

- (1)  sq yd  
 yd

Answers 80

(1) yd

129. If a playing field is 56 yards wide and 115 yards long, what is the perimeter?



Perimeter =  (1)

- (1)  yd  
 sq. yd

Answers 342

(1) yd

130. A metal strip is being installed around a workbench that is 9 feet long and 3 feet wide. Find how much stripping is needed.

The amount of metal stripping needed to be installed around the workbench is  (1)

- (1)  ft.  
 sq. ft.

Answers 24

(1) ft.

131. Find the perimeter of the top of a square compact case if the length of one side is 11 inches.

The perimeter is  (1)

- (1)  square inches.  
 cubic inches.  
 inches.

Answers 44

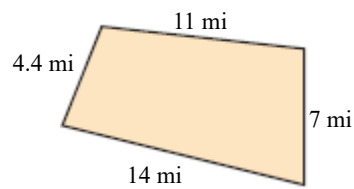
(1) inches.

132. A rectangular room measures 10 feet by 12 feet. Find the cost of installing a strip of wallpaper around the room if the wallpaper costs \$0.75 per foot.

Total cost = \$

Answer: 33.00

133. Find the distance around the given figure.



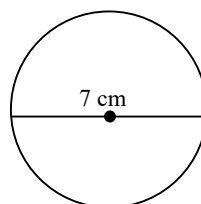
The distance around the figure is  (1)

- (1)  sq mi.  
 mi.

Answers 36.4

(1) mi.

134. Find the circumference of the circle. Give the exact circumference and then an approximation. Use  $\pi \approx 3.14$ .



The exact circumference of the circle is  (1)   
 (Simplify your answer. Type an exact answer in terms of  $\pi$ .)

The approximate circumference of the circle is  (2)   
 (Type an integer or a decimal rounded to the nearest hundredth.)

- (1)  square centimeters.      (2)  centimeters.  
 centimeters.                       meters.  
 feet.

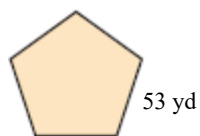
Answers  $7\pi$

(1) centimeters.

21.98

(2) centimeters.

135. Find the distance around the regular pentagon shown to the right.



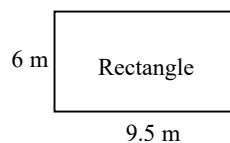
The distance around the figure is  (1)

- (1)  yd.  
 sq yd.

Answers 265

(1) yd.

136. Find the area of the given geometric figure.



The area of the rectangle is  (1)   
 (Simplify your answer.)

- (1)  sq m.  
 cu m.  
 m.

Answers 57

(1) sq m.

137. A computer has shape of a rectangular solid. Find the volume of the computer, with dimensions of 4 inches by 4 inches by 4.9 inches.

The volume of the computer is  (1)   
 (Simplify your answer. Type an integer or a decimal.)

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

Answers 78.4

(1) cu in.

138. Convert the measurement indicated.

12 in to feet

---

 $12 \text{ in} = \boxed{\phantom{00}} \text{ ft}$

Answer: 1

---

139. Convert the measurement as indicated.

12 yd to feet

---

 $12 \text{ yd} = \boxed{\phantom{00}} \text{ ft}$

Answer: 36

---

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

7    14

---

 $7 \text{ (1) } \boxed{\phantom{00}} 14$

- (1)  =  
 <  
 >

Answer: (1) <

---

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

$(15 + a) + 15$

---

 $(15 + a) + 15 = \boxed{\phantom{00}}$

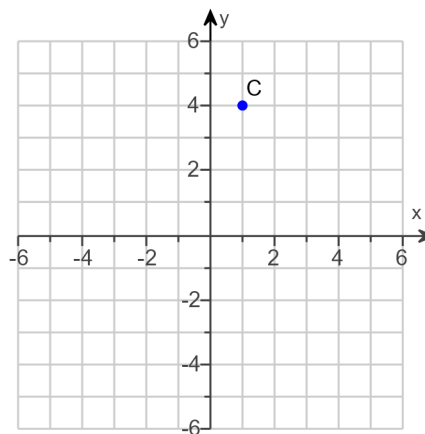
Answer:  $a + 30$

---

142.

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

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



Answer: (1,4)

143.

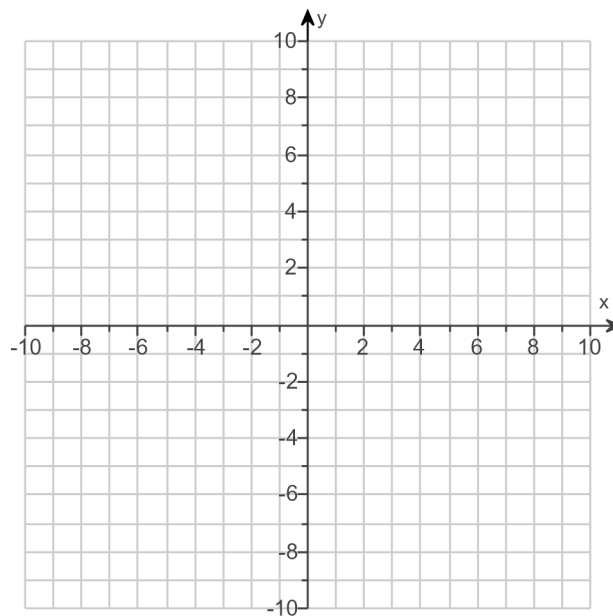
For the equation, find three ordered pair solutions by completing the table. Then use any two of the ordered pairs to graph the equation.

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

Complete the table below.

x	y
0	
-4	
4	

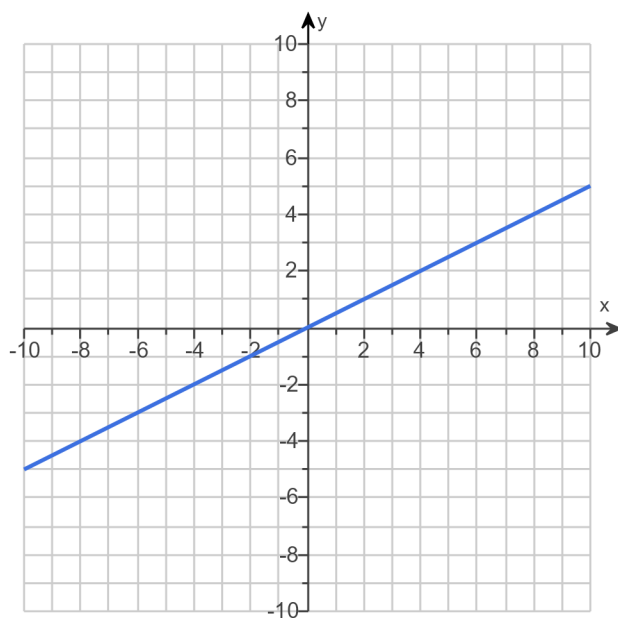
Use the graphing tool to graph the equation.



Answers 0

- 2

2

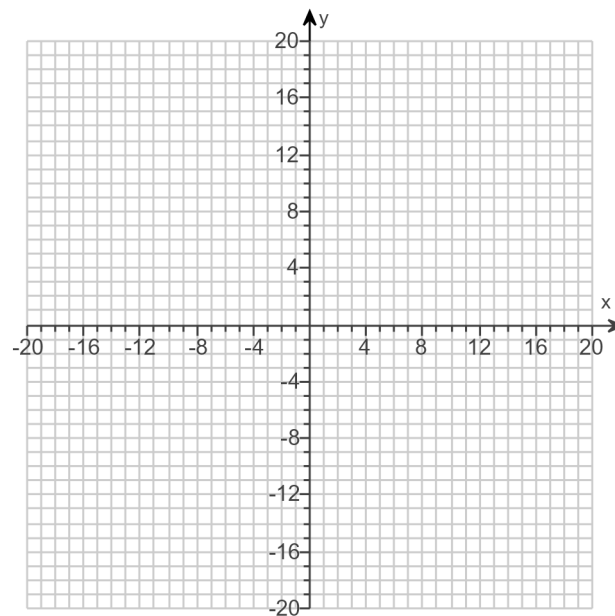




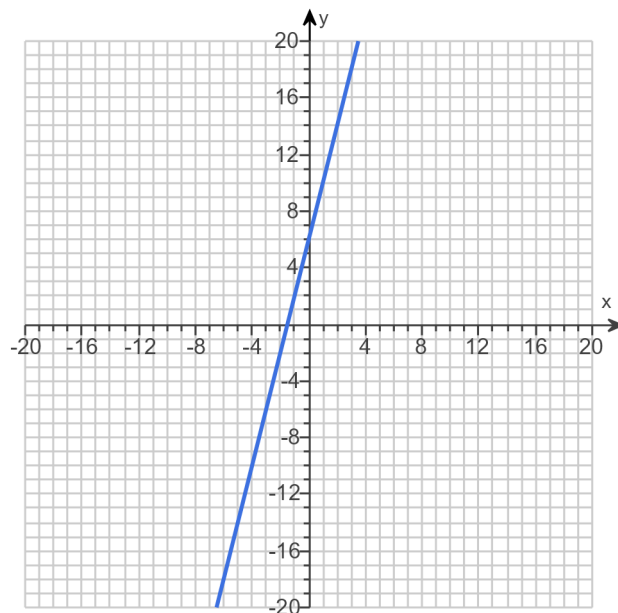
144. Graph the equation.

$$y = 4x + 6$$

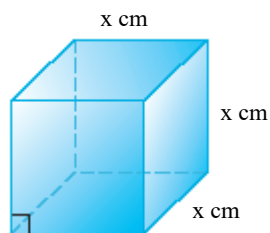
Use the graphing tool to graph the line.



Answer:



145. 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 10 centimeters.



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

Answer: 1000