Student: _____	Instructor: Alfredo Alvarez	Assignment:
Date: _____	Course: Math 0410 / 0320 Alvarez	MATH5THGRADEWARMUP149e

1. Find the perimeter of the figure.

5 feet   8 feet   10 feet
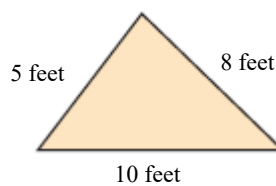
The perimeter is [ ] feet.

Answer: 23

2. Find the perimeter of the figure.

[ ] ft

Rectangle   1 foot   2 feet
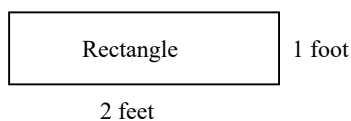
Answer: 6

3. Find the perimeter of the figure.

[ ] cm

20 centimeters
2 centimeters
8 centimeters
9 centimeters
19 centimeters
19 centimeters
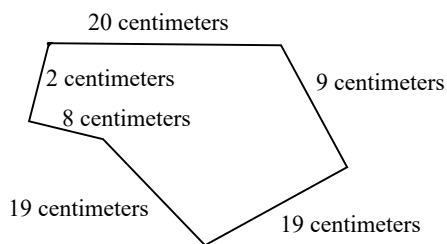
Answer: 77

4. Find the perimeter of the figure.

10 meters
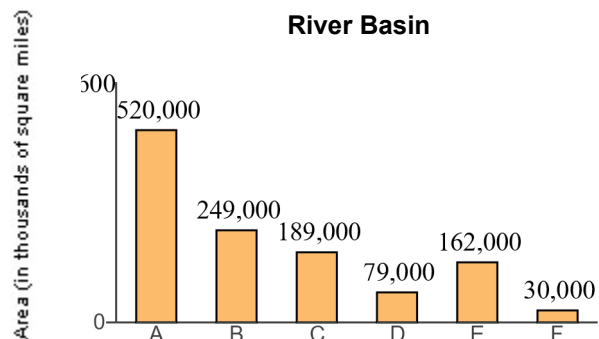5 meters
5 meters
11 meters
?
?
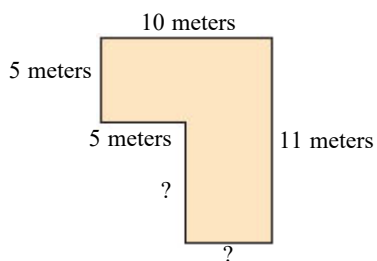
The perimeter is [ ] m.

Answer: 42

5. A new notebook computer with DVD player costs $1373. Derik Muller has $1444 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.
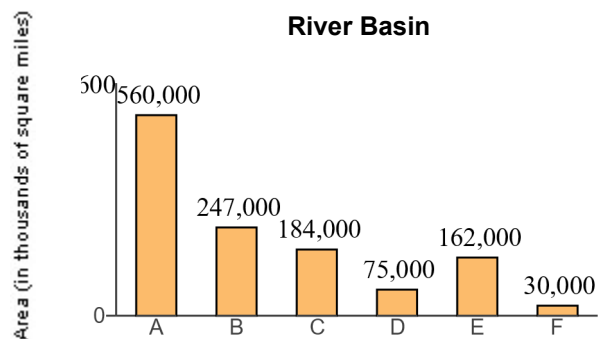
Answer: 71

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

River Basin

Area (in thousands of square miles)

500
520,000
249,000
189,000
79,000
162,000
30,000
A   B   C   D   E   F

[   ] sq mi

Answer: 268,000

---

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

River Basin

Area (in thousands of square miles)

500
560,000
247,000
184,000
75,000
162,000
30,000
A   B   C   D   E   F

[   ] sq mi

Answer: 313,000

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 feet of fencing are needed to enclose the the area shown?

109 feet

99 feet

118 feet

64 feet
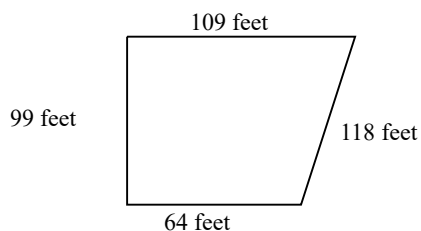
[   ] ft

Answer: 390

---

9. Evelyn Abrams is reading a 971-page book. If she has just finished reading page 967, how many more pages must she read to finish the book?

_____ pages

Answer: 4

10. A permanent game board is made of granite. It is in the shape of a square with side lengths of 42 ft. Find the perimeter of the square playing board.

The perimeter is _____ feet.

Answer: 168

11.
The table on the right shows the number of particular stores in ten states. Which state has the most stores?

State (1) _____ has the most stores.

The Top States for the Stores

State	Number of Stores
A	34
B	123
C	71
D	43
E	75
F	62
G	51
H	79
K	49
L	108

(1) ○ A   ○ E   ○ K
     ○ B   ○ F   ○ L
     ○ C   ○ G
     ○ D   ○ H

Answer: (1) B

12.
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	84
California	100
Florida	64
Georgia	161
Illinois	66
New York	67
Michigan	21
Minnesota	90
Ohio	96
Texas	89

Answer: 357

13. Round 9,778 to the nearest hundred.

The number 9,778 rounded to the nearest hundred is ⬚.

Answer: 9,800

14. Round 698 to the nearest ten.

698 rounded to the nearest ten is ⬚.

Answer: 700

15. Round 92,388 to the nearest thousand.

92,388 rounded to the nearest thousand is ⬚.

Answer: 92,000

16. Use the distributive property to rewrite each expression.

6(2 + 9)

6(2 + 9) = ⬚
(Type an expression. Do not simplify.)

Answer: 6 • 2 + 6 • 9

17.
Find the area and the perimeter of the rectangle shown to the right.

9 meters

7 meters

The area of the rectangle is ⬚ (1) ⬚

The perimeter of the rectangle is ⬚ (2) ⬚

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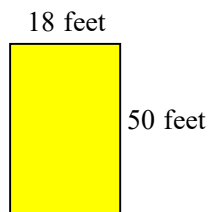　　◯ cubic meters.　　　◯ meters.
　　◯ square meters.　　　◯ square meters.

Answers 63

(1) square meters.

32

(2) meters.

18.
Find the area and the perimeter of the rectangle shown to the right.

18 feet

50 feet

The area of the rectangle is [   ] (1) [   ]

The perimeter of the rectangle is [   ] (2) [   ]

(1) ◯ square feet.   (2) ◯ cubic feet.
     ◯ cubic feet.   ◯ square feet.
     ◯ feet.   ◯ feet.

Answers 900

　　　　(1) square feet.

　　　　136

　　　　(2) feet.

---

19. One triple fudge brownie contains 123 calories. How many calories are in 3 triple fudge brownies?

[   ] calories

Answer: 369

---

20. The textbook for a course in biology costs $93. There are 35 students in the class. Find the total cost of the biology books for the class.

The total cost is $[   ].

Answer: 3,255

21. Cabot Creamery is packing a palette of 20-lb boxes of cheddar cheese to send to a local restaurant. There are three layers of boxes on the pallet, and each layer is five boxes wide by three boxes deep.
    a. How many boxes are in one layer?
    b. How many boxes are on the pallet?
    c. 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 15

          45

          900

---

22. A plot of land measures 60 feet by 180 feet. Find its area.

The area of the rectangle is [   ] (1) [   ]

(1) ◯ feet.
     ◯ cubic feet.
     ◯ square feet.

   Answers 10,800

          (1) square feet.

23.
The largest hotel lobby in the world can be found at the Mega Grand Hotel. It is in the shape of a rectangle that measures 224 feet wide by 315 feet in length. Find its area.

224 feet

315 feet
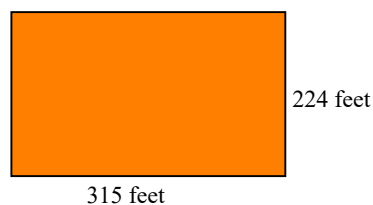
The area of the lobby is [   ] (1) [   ]

(1) ◯ feet.
     ◯ cubic feet.
     ◯ square feet.

   Answers 70,560

          (1) square feet.

---

24. A pixel is a rectangular dot on a graphing calculator screen. If a graphing calculator screen contains 66 pixels in a row and 94 pixels in a column, find the total number of pixels on a screen.

The total number of pixels on a screen is [   ].

   Answer: 6,204

25. A line of print on a computer contains 90 characters. Find how many characters there are in 18 lines.

[   ] characters

   Answer: 1620

26. One ounce of nuts contains 161 calories. How many calories are in 15 ounces of nuts?

[   ] calories

   Answer: 2415

27. The Thespian club at a local community college is ordering T-shirts. T-shirts size S, M, or L cost $12 each and T-shirts size XL or XXL cost $13 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	10	$12	$120
M	3		
L	4		
XL	2		
XXL	3		
		Total Cost	____

T-Shirt Size	Number of Shirts Ordered	Cost per Shirt	Cost per Size Ordered
S	10	$12	$120
M	3	$	$
L	4	$	$
XL	2	$	$
XXL	3	$	$
		Total Cost $	

Answers 12

36

12

48

13

26

13

39

269

28. A plant for a tea company has bagging machines capable of bagging 1000 bags of tea per minute. If the plant runs 22 hours a day, how many tea bags are produced in one day?

The company produces [   ] tea bags in one day of operation.

Answer: 1,320,000

29. Find the quotient.

$$\frac{45}{5}$$

Select the correct choice below and fill in any answer boxes in your choice.

○ **A.** $\frac{45}{5}$ = _____

○ **B.** The answer is undefined.

Answer: A. $\frac{45}{5}$ = | **9** |

---

30. Divide the following and then check by multiplying.

$$2\overline{)84}$$

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 | **42** | .

---

31. Divide the following and then check by multiplying.

$$5\overline{)260}$$

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 | **52** | .

32. Divide the following and then check by multiplying.

    8)‾1969‾

    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 [**246**] R [**1**] .

33. A truck hauls wheat to a storage granary. It carries a total of 5,500 bushels of wheat in 11 trips. How much does the truck haul each trip if each trip it hauls the same amount?

    The truck hauls [   ] bushels each trip.

    Answer: 500

34. There is a bridge over a highway every two miles. The first bridge is at the beginning of a 135-mile stretch of highway. Find how many bridges there are over 135 miles of highway.

    [   ] bridges

    Answer: 68

35. Suppose the elevation of a peak on a certain planet is 10,560 feet. A mile is 5280 feet. How many miles tall is the peak?

    The peak is [   ] miles tall.

    Answer: 2

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

    20, 25, 11, 26, 17, 15

    The average value is [   ] .

    Answer: 19

37. Find the value of the expression.

12^2

$12^2 = \boxed{}$

Answer: 144

---

38. Evaluate.

3^4

$3^4 = \boxed{}$

Answer: 81

---

39. Simplify.

$36 + 6 \cdot 6$

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

○ **A.** $36 + 6 \cdot 6 = $ _____

○ **B.** The expression is undefined.

Answer: A. $36 + 6 \cdot 6 = \boxed{\textbf{72}}$

---

40. Simplify.

$40 \div 8 \cdot 5 + 9$

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

○ **A.** $40 \div 8 \cdot 5 + 9 = $ _____

○ **B.** The expression is undefined.

Answer: A. $40 \div 8 \cdot 5 + 9 = \boxed{\textbf{34}}$

---

41. Simplify.

$15 \div 3 - 1$

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

○ **A.** $15 \div 3 - 1 = $ _____

○ **B.** The expression is undefined.

Answer: A. $15 \div 3 - 1 = \boxed{\textbf{4}}$

---

42. Simplify.

$$18 + \frac{45}{5}$$

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

○ **A.** $18 + \frac{45}{5} =$ _____

○ **B.** The expression is undefined.

Answer: A. $18 + \frac{45}{5} =$ | **27** |

---

43. Simplify.

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

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

○ **A.** $6 \cdot 2 + 6 \cdot 3 =$ _____

○ **B.** The expression is undefined.

Answer: A. $6 \cdot 2 + 6 \cdot 3 =$ | **30** |

---

44. Simplify.

$$(2 + 7) \cdot (9 - 6)$$

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

○ **A.** $(2 + 7) \cdot (9 - 6) =$ _____

○ **B.** The expression is undefined.

Answer: A. $(2 + 7) \cdot (9 - 6) =$ | **27** |

---

45. Simplify.

$$3^4 - [26 - (10 - 7)]$$

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

○ **A.** $3^4 - [26 - (10 - 7)] =$ _____

○ **B.** The expression is undefined.

Answer: A. $3^4 - [26 - (10 - 7)] =$ | **58** |

---

46. Evaluate the expression for $z = 7$.

    $3 + 4z$

    $3 + 4z = \boxed{}$

    Answer: 31

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

    $3xz - 4x$

    $3xz - 4x = \boxed{}$

    Answer: 10

48. Evaluate the expression for $x = 2$, $y = 2$, and $z = 4$.

    $z - x + y$

    The answer is $\boxed{}$.

    Answer: 4

49. Evaluate the expression for $x = 2$ and $z = 4$.

    $3x - z$

    $3x - z = \boxed{}$

    Answer: 2

50. Evaluate the algebraic expression for the given value.

    $x^2 - 2x + 7$, for $x = 4$

    When $x = 4$, $x^2 - 2x + 7 = \boxed{}$.
    (Simplify your answer.)

    Answer: 15

51. Simplify.

    $3 + 4 \cdot 5 - 11$

    $3 + 4 \cdot 5 - 11 = \boxed{}$

    Answer: 12

52. Solve. Check your solution.

$$x + 7 = 10$$

The solution is $x =$ [   ].

Answer: 3

53. Solve. Check your solution.

$$23 = y - 9$$

The solution is $y =$ [   ].

Answer: 32

54. Solve.

$$4x = 48$$

The solution is $x =$ [   ].

Answer: 12

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

$$x - 4 = -1 + 3$$

The solution is $x =$ [   ].

Answer: 6

56. Solve the following equation.

$$5x - 5 = 0$$

$x =$ [   ]

Answer: 1

57. Solve the equation.

$$5n + 50 = 55$$

$n =$ [   ]

Answer: 1

58. Find the prime factorization of the following number.

    44

    The prime factorization of 44 is $\boxed{}$.

    Answer: $2^2 \cdot 11$

59. Find the prime factorization of the following number.

    4

    The prime factorization of 4 is $\boxed{}$.

    Answer: 2^2

60. Write the prime factorization of 592.

    The prime factorization of 592 is (1) $\boxed{}$

    (1) ○ $2^5 \cdot 37$.   ○ $2 \cdot 3 \cdot 5 \cdot 7$.
    ○ $2^4 \cdot 37$.
    ○ $2 \cdot 37$.
    ○ $2^3 \cdot 37$.

    Answer: (1) $2^4 \cdot 37$.

61. Find the prime factorization of the following number.

    190

    The prime factorization of 190 is $\boxed{}$.

    Answer: $5 \cdot 2 \cdot 19$

62. Divide $-\dfrac{15}{16} \div 30$. Write the quotient in simplest form.

    $-\dfrac{15}{16} \div 30 = \boxed{}$ (Type an integer or a fraction.)

    Answer: $-\dfrac{1}{32}$

63. Perform the indicated operation.

$$4 \div \frac{9}{10}$$

$4 \div \dfrac{9}{10} = \boxed{}$ (Simplify your answer.)

Answer: $\dfrac{40}{9}$

64. Perform the indicated operation.

$$\frac{5}{7} \div \frac{11}{14}$$

$\dfrac{5}{7} \div \dfrac{11}{14} = \boxed{}$ (Type an integer or a simplified fraction.)

Answer: $\dfrac{10}{11}$

65. Find $\dfrac{1}{5}$ of 180.

$\dfrac{1}{5}$ of 180 is $\boxed{}$. (Simplify your answer. Type a whole number, fraction, or mixed number.)

Answer: 36

66. Find $\dfrac{3}{4}$ of 24. Write the answer in simplest form.

$\dfrac{3}{4}$ of 24 is $\boxed{}$. (Simplify your answer.)

Answer: 18

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

0.62   0.69

0.62 $\boxed{}$ 0.69

Answer: $<$

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

     1.497   1.5

1.497 [_____] 1.5

     Answer: $<$

---

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

     0.427   0.42700

0.427 [_____] 0.42700

     Answer: $=$

---

70.   Round the decimal to the nearest tenth.

     0.33

0.33 rounded to the nearest tenth is [_____].

     Answer: 0.3

---

71.   Round the decimal to the nearest ten.

     13,760.021

13,760.021 rounded to the nearest tens place is [_____].

     Answer: 13,760

72.

Round 0.4226 to the nearest thousandth. $0.4226 \approx$ [_____]

     Answer: 0.423

---

73.   Round 4.72661419 to the nearest tenth.

4.72661419 rounded to the nearest tenth is [_____].

     Answer: 4.7

---

74. Round the monetary amount to the nearest dollar.

    $24.77

    $24.77 rounded to the nearest dollar is $ [   ].

    Answer: 25

75. Round $0.8736 to the nearest cent.

    $0.8736 rounded to the nearest cent is $ [   ].

    Answer: 0.87

76. A used biology textbook is priced at $34.81. Round this price to the nearest dollar.

    $34.81 rounded to the nearest dollar is $ [   ].

    Answer: 35

77. Write as a decimal.

    $4\dfrac{19}{100}$

    $4\dfrac{19}{100}$ = [   ]

    Answer: 4.19

78. Add the following.

    6.5 + 6.24

    6.5 + 6.24 = [   ] (Type an integer or a decimal.)

    Answer: 12.74

79. Subtract and check.

    9.7 − 2.5

    9.7 − 2.5 = [   ]

    Answer: 7.2

80. Subtract and check the following.

    15 − 1.1

    15 − 1.1 = [   ] (Type an integer or a decimal.)

    Answer: 13.9

81. A landscape architect is planning a border for a flower garden shaped like a triangle. The sides of the garden measure 17.3 feet, 24.66 feet, and 22.9 feet. Find the amount of border material needed.

    24.66 feet

    17.3 feet   22.9 feet
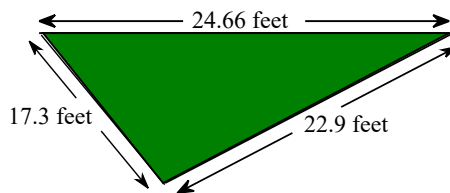
    The amount of border material needed is [   ] feet.
    (Type an integer or a decimal.)

    Answer: 64.86

82.

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

The World's Top Chocolate-Consuming Countries

Pounds of Chocolate per Person per Year

26.24
21.83
20.94
19.40   18.30

A   B   C   D   E
Country
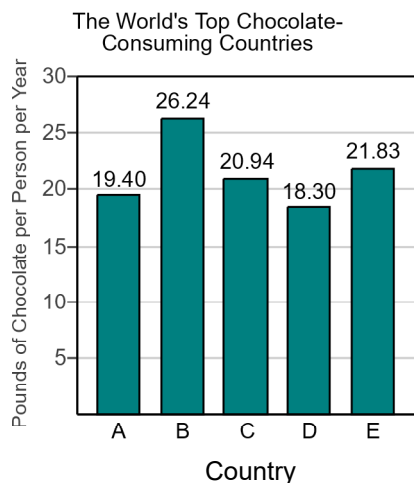
Answer: Country B

83. 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.

    Penny   Nickel   Dime   Quarter

    $0.01 $0.05 $0.10 $0.25

    The total value of the group is $[   ].

    Answer: 1.30

84. Use the values of the coins given to the right. Name the different ways that coins can have a value of $0.15 given that you may use no more than 10 coins.

Penny	Nickel	Dime	Quarter
$0.01	$0.05	$0.10	$0.25

Choose the correct answer below. Select all that apply.

☐ **A.** 3 nickels and 6 pennies

☐ **B.** 1 dime and 5 pennies

☐ **C.** 3 nickels

☐ **D.** 2 nickels and 5 pennies

☐ **E.** 1 dime, 3 nickels and 5 pennies

☐ **F.** 1 dime and 1 nickel

Answer: B. 1 dime and 5 pennies, C. 3 nickels, D. 2 nickels and 5 pennies, F. 1 dime and 1 nickel

---

85.

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

33 ft
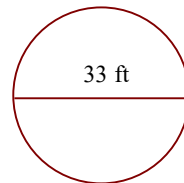
a. Find the circumference of the circle in terms of π.

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 33π

103.62

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

4.7 yards
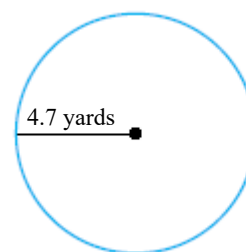
a. Find the circumference of the circle in terms of π.

The exact circumference is [ ] yd.

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

The approximate circumference is [ ] yd. (Round to the nearest thousandth as needed.)

Answers 9.4π

29.516

87. A 1-ounce serving of cream cheese contains 5.7 grams of saturated fat. How much saturated fat is in 7 ounces of cream cheese?

[ ] g

Answer: 39.9

88. The screen of a portable digital device is a rectangle that measures 4.5 inches by 3.6 inches. Find the area of the screen.

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

Answer: 16.2

89. The diameter of a ferris wheel is 150 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 150π

471.00

90. A meter is a unit of length approximately equal to 39.37 inches. If someone is 1.87 meters tall, what is his or her approximate height in inches?

Using the given conversion, someone who is 1.87 meters tall has a height of [_____] inches.
(Type an integer or a decimal.)

Answer: 73.6219

---

91. Consider the circles at the right.
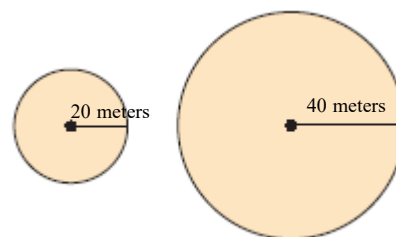
20 meters
40 meters

a. Approximate the circumference of each circle. Use π = 3.14.

The circumference of the smaller circle is approximately [_____] meters.
(Round to the nearest hundredth as needed.)
The circumference of the larger circle is approximately [_____] meters.
(Round to the nearest hundredth as needed.)

b. If the radius of a circle is doubled, is its corresponding circumference also doubled?

○ Yes
○ No

Answers 125.60

251.20

Yes

---

92. One year, farmers received an average of $13.035 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: 1303.50

---

93. Perform the indicated operation.

1.7 + 0.06

1.7 + 0.06 = [_____] (Type an integer or a decimal.)

Answer: 1.76

---

94. Find the decimal equivalent of the following fraction.

$$\frac{17}{25}$$

$\frac{17}{25} = $ [   ]

Answer: 0.68

95. Write as an equivalent decimal.

$$\frac{3}{4}$$

$\frac{3}{4} = $ [   ]

Answer: 0.75

96. Write $7\frac{9}{20}$ as a decimal.

$7\frac{9}{20} = $ [   ]

Answer: 7.45

97. Find the mean, median, and mode for the following set of numbers. If necessary, round the mean to one decimal place.

21, 28, 22, 23, 16

The mean is [   ].
(Type an integer or decimal rounded to one decimal place as needed. Use a comma to separate answers as needed.)

The median is [   ].
(Type an integer or decimal rounded to one decimal place as needed. Use a comma to separate answers as needed.)

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

○ **A.** The mode is _____ .
(Type an integer or decimal rounded to one decimal place as needed. Use a comma to separate answers as needed.)

○ **B.** There is no mode.

Answers 22

22

B. There is no mode.

98. A stereo normally priced at $730 is on sale for 5% off. Find the discount and the sale price.

The discount is $_____.

The sale price is $_____.

Answers 36.50

693.50

99. A company borrows $73,000 for 5 years at a simple interest rate of 11.5%. Find the interest paid on the loan and the total amount paid.

The interest paid on the loan is $_____.

The total amount paid is $_____.

Answers 41,975

114,975

100.
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.

■ Parent or guardian's home 290
■ Off-campus rental 117
■ Campus housing 210
□ Other arrangements 13
■ Own off-campus housing 70

Choose the correct answer below.

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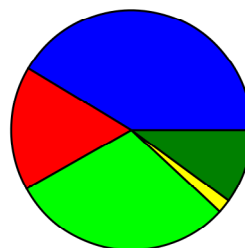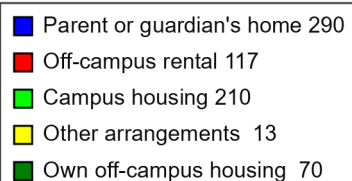
Answer: A. Parent or guardian's home

101.
Find the square root.

$\sqrt{9}$

$\sqrt{9} =$ _____

Answer: 3

102.

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

6

8

c
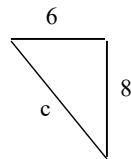
The length of the third side is [   ].

Answer: 10

103.

Find the unknown length in the right triangle.

35 mm

84 mm

?
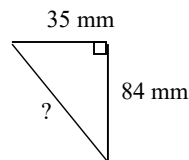
The length of the unknown side is [   ] mm.

Answer: 91

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

leg = 12, leg = 5

What is the length of the side not given?

[   ] (Round to the nearest thousandth as needed.)

Answer: 13

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

leg = 65, hypotenuse = 97

The unknown length is [   ].
(Type an integer or decimal rounded to the nearest thousandth as needed.)

Answer: 72

106. A playing field is a rectangle that is 360 feet long by 270 feet wide. Find, to the nearest foot, the length of a straight-line run that started at one corner and went diagonally to end at the opposite corner.
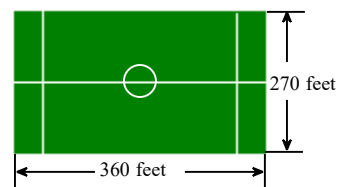
The length of the straight-line run is ⬚ feet.
(Round to the nearest foot as needed.)

Answer: 450

---

107. Determine whether the pair of triangles is congruent. If congruent, state the reason why, such as SSS, SAS, or ASA.
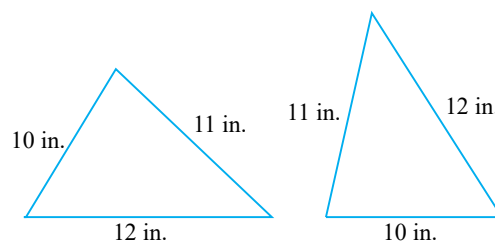
Choose the correct answer below.

○ Congruent by ASA
○ Congruent by SAS
○ Congruent by SSS
○ Not congruent

Answer: Congruent by SSS

---

108. Determine whether the pair of triangles is congruent. If congruent, state the reason why, such as SSS, SAS, or ASA.
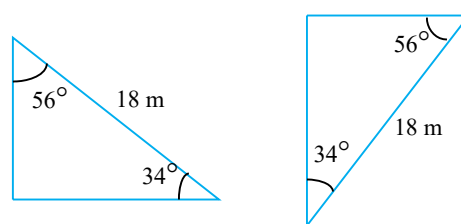
Choose the correct answer below.

○ Congruent by ASA
○ Congruent by SAS
○ Congruent by SSS
○ Not congruent

Answer: Congruent by ASA

---

109. Determine whether the pair of triangles is congruent. If congruent, state the reason why, such as SSS, SAS, or ASA.
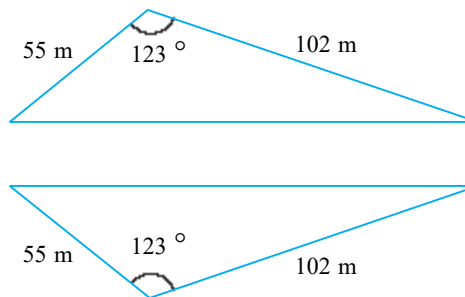
Choose the correct answer below.

○ Congruent by ASA
○ Congruent by SSS
○ Congruent by SAS
○ Not congruent

Answer: Congruent by SAS

110.

Triangles A and B are similar triangles. Find the ratio of the corresponding sides of triangle A to triangle B.
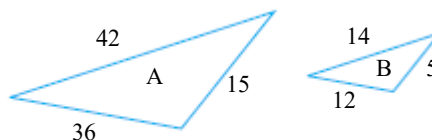
The ratio of the corresponding sides of triangles A to B is ▯/▯.

(Simplify your answer.)

Answers 3

1

111. Find the ratio of the corresponding sides of the given similar triangles.
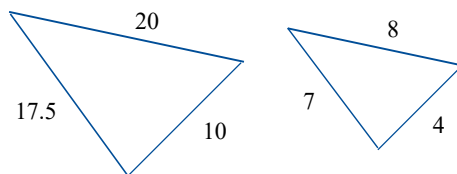
The ratio of the corresponding sides of the first triangle to the second triangle is ▯.

(Type the ratio as a simplified fraction.)

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

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

9   13.5

3   n

n = [   ]

Answer: 4.5

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

50   40

25   n
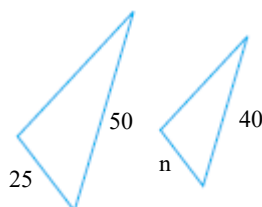
n = [   ]

Answer: 20

114. 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.

x

30 ft

36 ft   4 ft
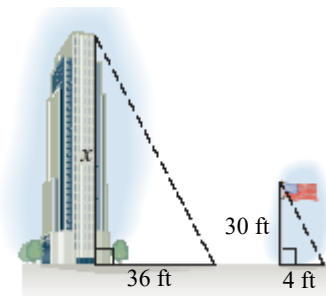
The height of the building is [   ] feet.

Answer: 270

115. If a 40-foot tree casts a 16-foot shadow, find the length of the shadow cast by a 24-foot tree.

The length of the tree's shadow is [   ] feet.
(Type an integer or a decimal rounded to the nearest tenth.)

Answer: 9.6

116. Draw a tree diagram for choosing a vowel, (a, e, i, o, u) and then a number (1, 2, 3 or 4). Use the diagram to find the number of possible outcomes.
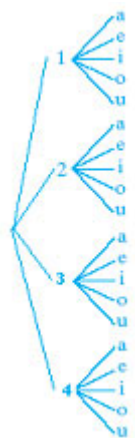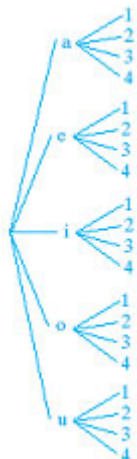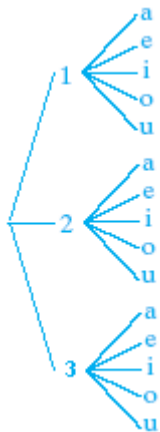
A.   B.   C.   D.
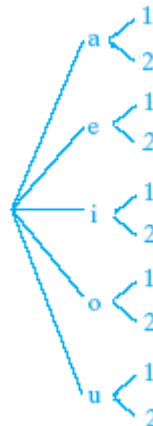
Based on the tree, what is the number of possible outcomes? [_____]

Answers
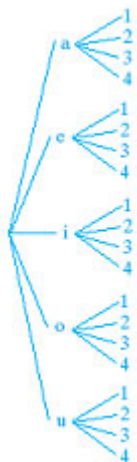
B.

20

117.

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

Spinner B
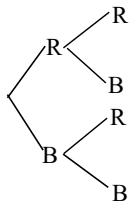
Choose the correct tree diagram below.

○ **A.**

R
R
B
R
B
B

○ **B.**

R
R
B
B
R
B
R
R
B
B
R
B

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

○ **C.**

R
B
B

○ **D.**

R
R
B

Answers

R
R
B
R
B
B

A.

4

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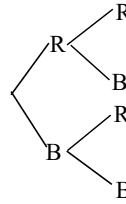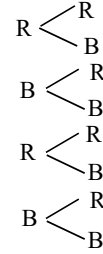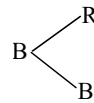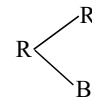
118. If a single 8-sided die is tossed once, find the probability of rolling a 6.

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

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

---

119. If a single 6-sided die is tossed once, find the probability of rolling a 2 or a 6.

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

Answer: $\dfrac{1}{3}$

---

120. If a single 20-sided die is tossed once, find the probability of rolling an odd number.

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

Answer: $\dfrac{1}{2}$

---

121. Suppose the spinner shown is spun once. Find the probability of spinning 3.
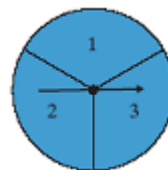
The probability is ⬚. (Type an integer or a simplified fraction.)

    Answer: $\dfrac{1}{3}$

122. Suppose that the spinner shown is spun once. Find the probability of the event that the result of a spin is 1, 2, or 3.
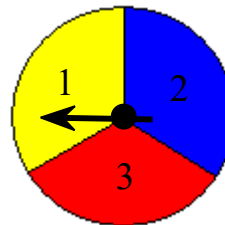
The probability is ⬚.
(Simplify your answer.)

    Answer: 1

123. A marble is selected at random from a jar containing 2 red marbles, 5 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: $\dfrac{2}{11}$

124. Find the perimeter of the following figure.

13 ft | Rectangle |

17 ft
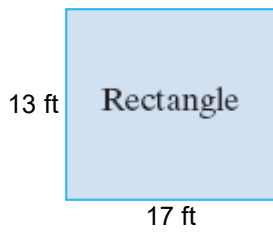
Perimeter = [   ] (1) [   ]

(1) ○ sq. ft
    ○ ft

Answers 60

(1) ft

---

125. Find the perimeter of the following figure.

Parallelogram   16 cm

26 cm
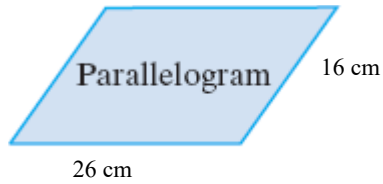
Perimeter = [   ] (1) [   ]

(1) ○ sq. cm
    ○ cm

Answers 84

(1) cm

126. Find the perimeter of the following figure.

12 in.   14 in.

16 in.
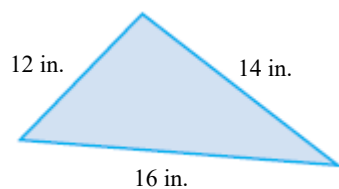
The perimeter is [_____] (1) [_____]

(1) ○ sq. in.
    ○ in.

Answers 42

(1) in.

---

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

18 ft   16 ft

15 ft   16 ft

23 ft
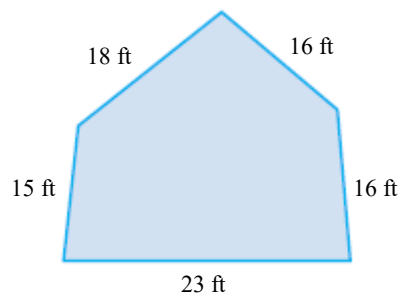
Perimeter = [_____] (1) [_____]

(1) ○ sq. ft.
    ○ ft.

Answers 88

(1) ft.

---

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

15 cm
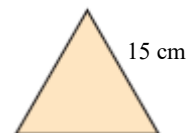
Perimeter = [_____] (1) [_____]

(1) ○ sq cm
    ○ cm

Answers 45

(1) cm

129. A computer has shape of a rectangular solid. Find the volume of the computer, with dimensions of 5 inches by 5 inches by 5.2 inches.

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

(1) ○ sq in.
    ○ in.
    ○ cu in.

   Answers 130.0

       (1) cu in.

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

     2 __ 4

2 (1) [　　　　] 4

(1) ○ >
    ○ =
    ○ <

   Answer: (1) <

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

     5   3

5 [　　　　] 3

   Answer: >

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

     5.89 ? 5.89

5.89 [　　　　] 5.89

   Answer: =

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

0 __ 8

0 (1) [   ] 8

(1) ○ >
     ○ =
     ○ <

Answer: (1) <

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

(16 + a) + 16

(16 + a) + 16 = [   ]

Answer: a + 32

135.

Plot the ordered pair (4,1). State in which quadrant or on which axis the point lies.

Plot the ordered pair on the graph to the right.

In which quadrant, or on which axis, does the point lie?

○ on the y-axis
○ I
○ IV
○ III
○ on the x-axis
○ II
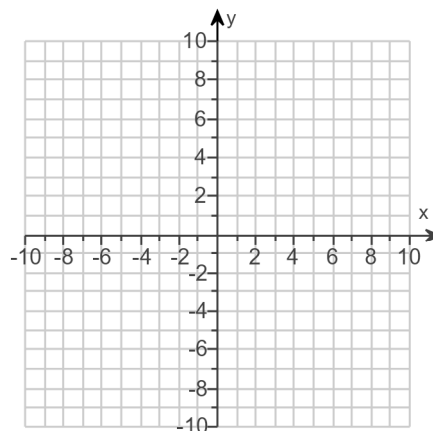
Answers
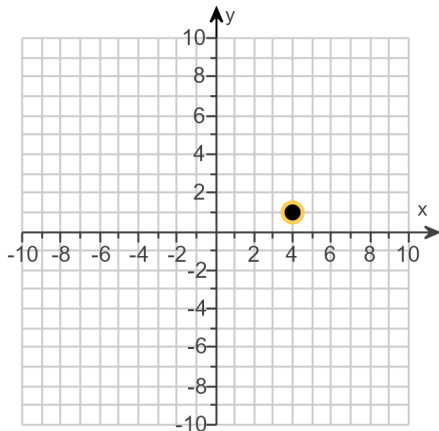
I

136.

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

The coordinates of C are ☐ .
(Type an ordered pair.)
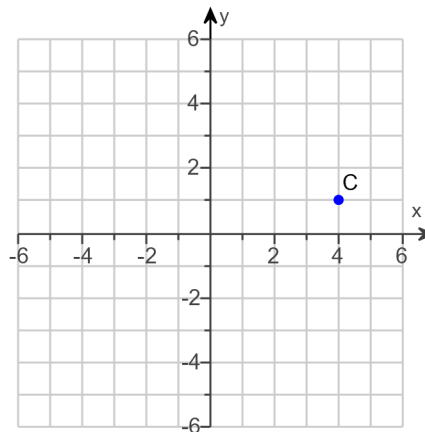
Answer: (4,1)

137.

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

The coordinates of B are ☐ .
(Type an ordered pair.)
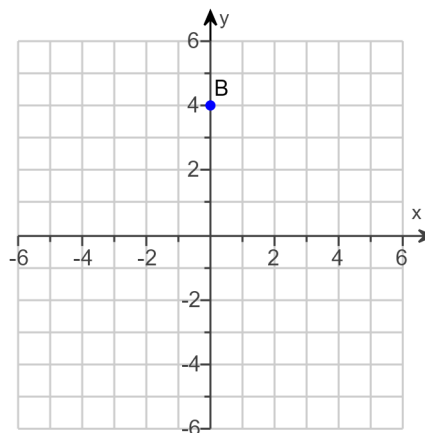
Answer: (0,4)

138.

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

The coordinates of C are ☐ .
(Type an ordered pair.)
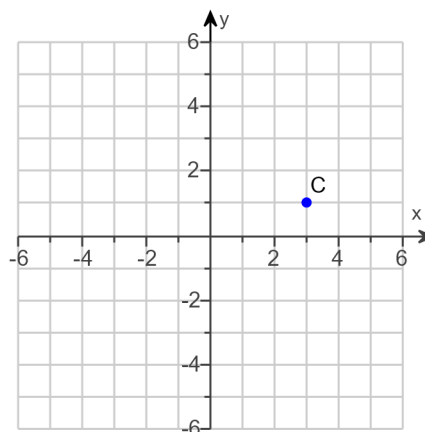
Answer: (3,1)

139.

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

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

Complete the table below.

x	y
0	
− 8	
8	

Use the graphing tool to graph the equation.
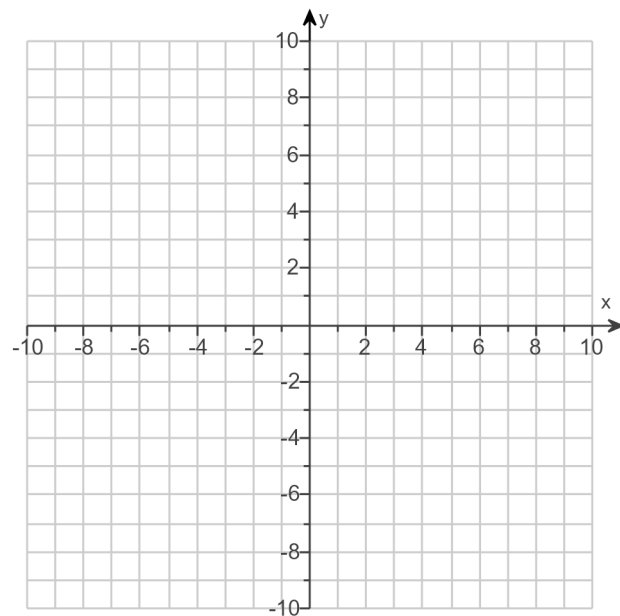
Answers 0

      − 2

      2
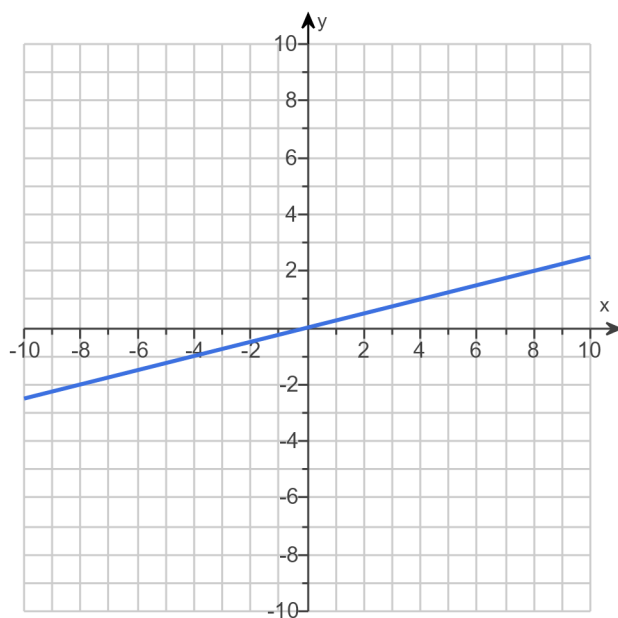
140.

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

$y = -2x + 8$

Find three ordered pair solutions of the given equation.

x	y
0	
1	
2	

Use the graphing tool to graph the line.
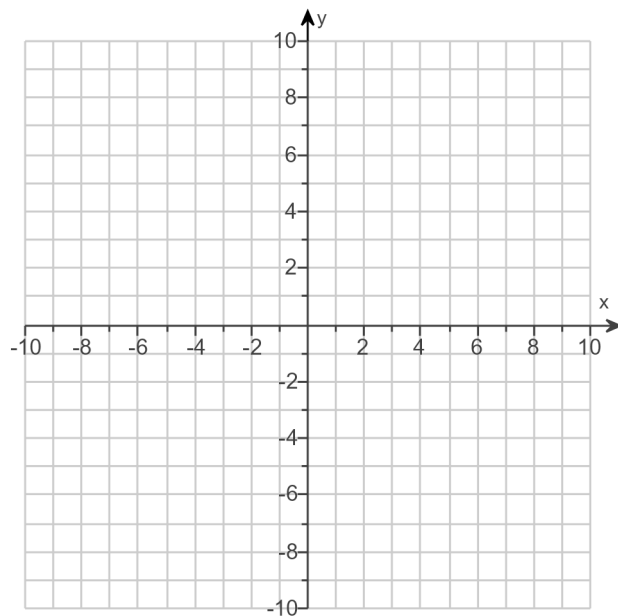
Answers 8

6

4
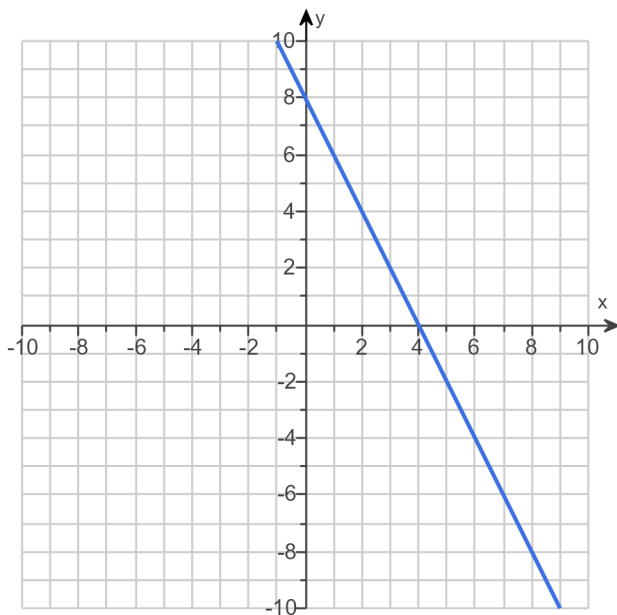
141.

Graph the equation.

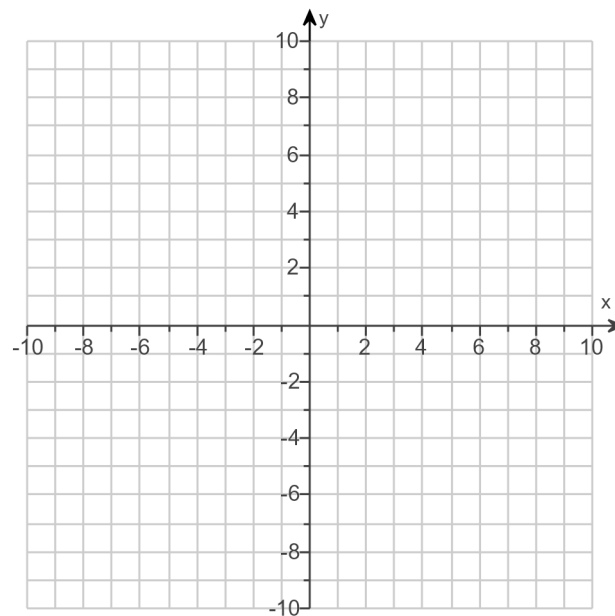y = 3x + 4

Use the graphing tool to graph the line.
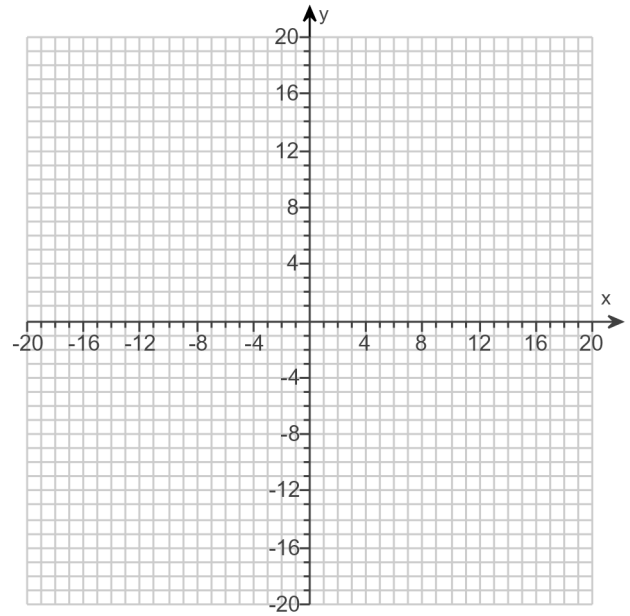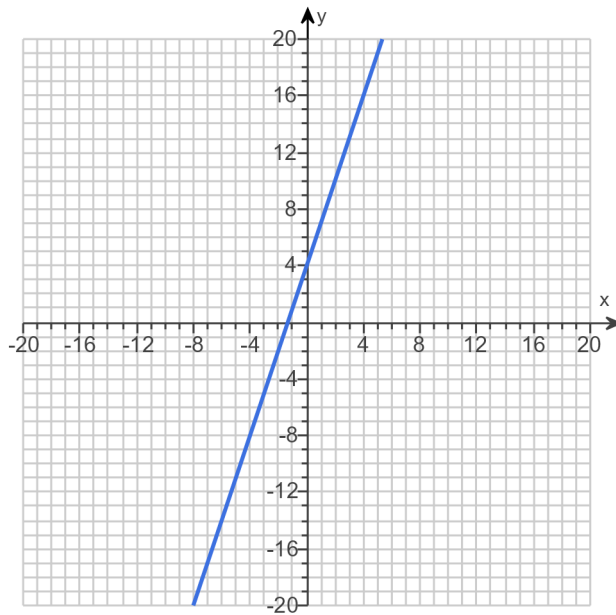
Answer:

142.

Graph the linear equation.

y = 8x

Use the graphing tool to graph the linear equation.
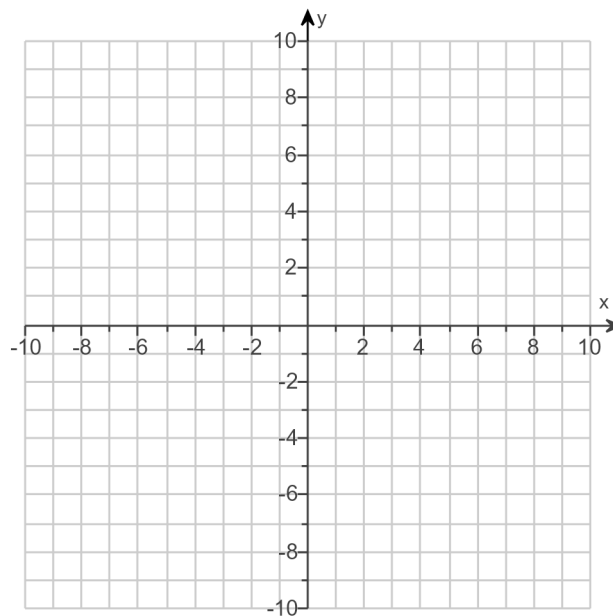
Answer:
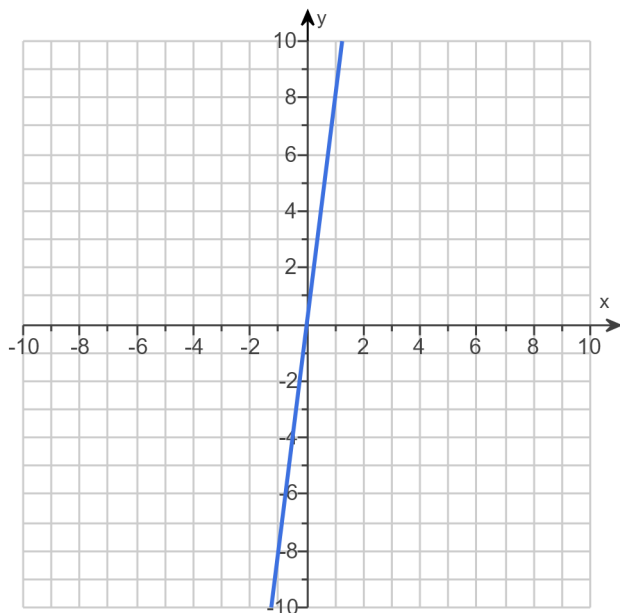
143.
Graph the linear equation.

$y = -3.5x + 1$

Use the graphing tool to graph the equation.
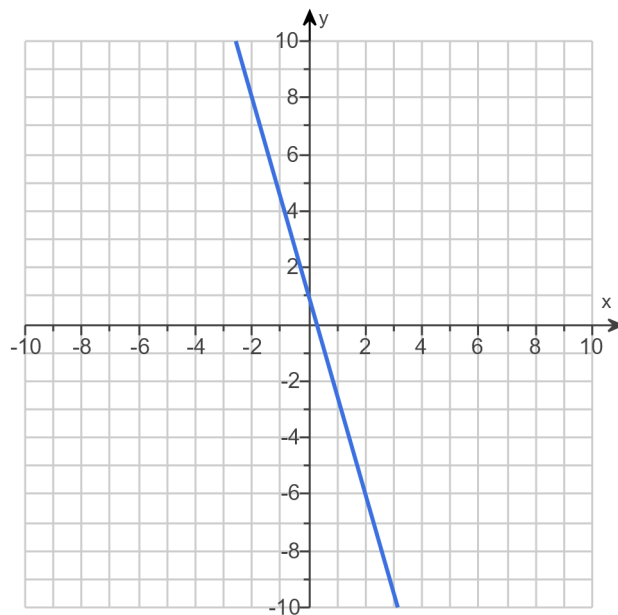
Answer:

144.   Given the following function, find f(− 5), f(0), and f(3).

$$f(x) = -3x - 4$$

f(− 5) = ⬚

f(0) = ⬚

f(3) = ⬚

Answers 11

− 4

− 13

145.   Given the following function, find f(− 5), f(0), and f(2).

$$f(x) = x^2 + 3$$

f(− 5) = ⬚

f(0) = ⬚

f(2) = ⬚

Answers 28

3

7

146.   Find f(− 4), f(0) and f(3) for the following function.

$$f(x) = -2x$$

f(− 4) = ⬚

f(0) = ⬚

f(3) = ⬚

Answers 8

0

− 6

147. Given the function f(x) = −2x + 4, find the indicated values.

(a) f(4)
(b) f(b)

(a) f(4) = [   ] (Simplify your answer.)

(b) f(b) = [   ] (Simplify your answer.)

  Answers −4

            −2b + 4

---

148. Graph the function.
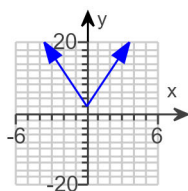
      f(x) = 5x − 2

Choose the correct graph below.
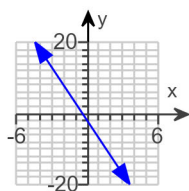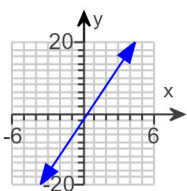
○ **A.**   ○ **B.**   ○ **C.**   ○ **D.**
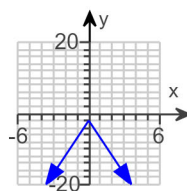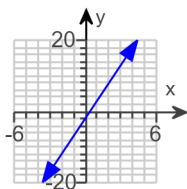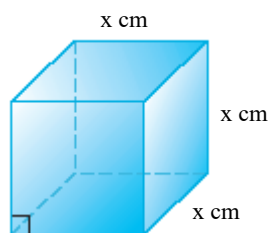

      Answer:

        B.

---

149. The function V(x) = x³ may be
      used to find the volume of a
      cube with side length x. Find
      the volume of a cube whose
      side is 8 centimeters.

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

      Answer: 512