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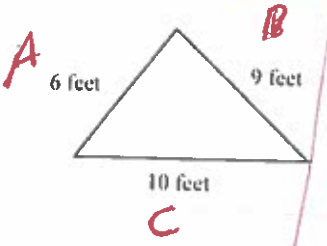
ate: _____ Course: Math 0410 / 0320 Alvarez

04-03-19
Assignment: 04-05-19
MATH5THSANANTFIESTA145PMR

1. Find the perimeter of the figure.

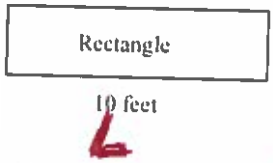


P = A + B + C
P = 6 + 9 + 10
P = 15 + 10
P = 25

The perimeter is [ ] feet.

Answer: 25

2. Find the perimeter of the figure.

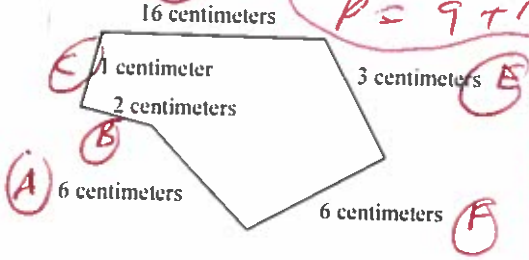


P = 2L + 2W
P = 2(10) + 2(7)
P = 20 + 14
P = 34

[ ] ft

Answer: 34

3. Find the perimeter of the figure.



P = A + B + C + D + E + F
P = 6 + 2 + 1 + 16 + 3 + 6
P = 8 + 1 + 16 + 3 + 6
P = 9 + 16 + 3 + 6
P = 25 + 3 + 6
P = 28 + 6
P = 34

[ ] cm

Answer: 34

4. A new notebook computer with DVD player costs $1434. Derik Muller has $1487 in his checking account. How much will be left in his checking account after he buys the notebook computer?

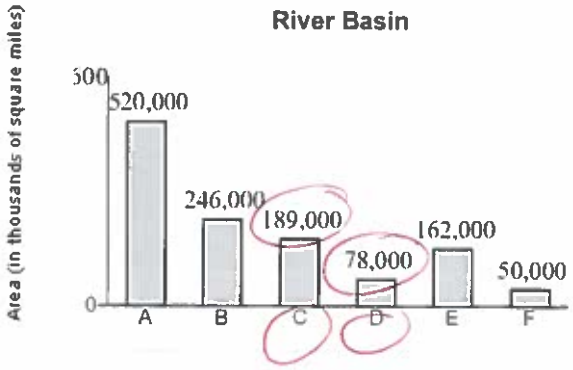
Derik will have $[ ] remaining in his checking account after he buys the notebook computer.

Answer: 53

1487
−1434
53

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

189 000
+ 78 000
267,000

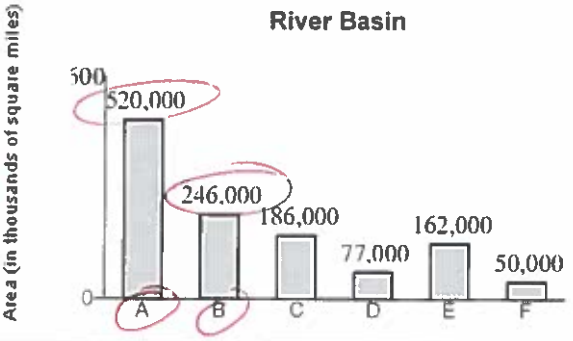


[ ] sq mi

Answer: 267,000

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

520 000
− 246 000
274,000

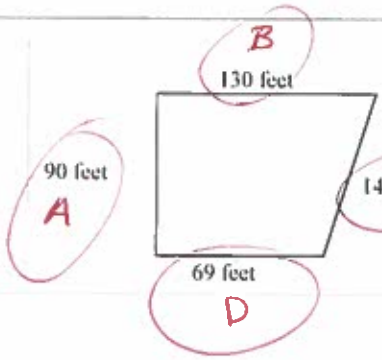


[ ] sq mi

Answer: 274,000

7. 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?

90
130
141
+ 69
430



P = A + B + C + D
P = 90 + 130 + 141 + 69
P = 430

[ ] ft

Answer: 430

8. Evelyn Abrams is reading a 910-page book. If she has just finished reading page 833, how many more pages must she read to finish the book?

910
− 833
77

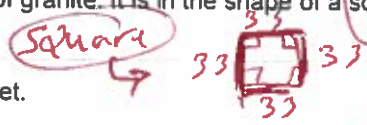
[ ] pages

Answer: 77

9. A permanent game board is made of granite. It is in the shape of a square with side lengths of 33 ft. Find the perimeter of the square playing board.

The perimeter is [ ] feet.

Answer: 132



10. 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.

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

Answer: (1) B

The Top States for the Stores

State	Number of Stores
A	34
B	121
C	72
D	42
E	75
F	62
G	53
H	78
K	46
L	108

State (B) has the most stores

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

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

1
189
130
+ 86
405

Answer: 405

State	Number of Stores
Arizona	189
California	130
Florida	56
Georgia	75
Illinois	53
New York	34
Michigan	43
Minnesota	72
Ohio	86
Texas	66

12. Round 7,275 to the nearest hundred.

The number 7,275 rounded to the nearest hundred is [ ].

Answer: 7,300

7,275 = 7300 =

7,275
since 7 ≥ 5 round up
ones
hundreds

13. Round 396 to the nearest ten.

396 rounded to the nearest ten is [ ].

Answer: 400

396 = 400 since 6 > 5 round up

14. Round 96,414 to the nearest thousand.

96,414 rounded to the nearest thousand is [ ].

Answer: 96,000

96,414 = 96,000 since 4 < 5 so not round up

15. Bargain Appliance Store advertises three dishwashers on sale at $1699, $699, and $799. Round each cost to the nearest hundred to estimate the total cost.

The estimated total cost is $[ ].

Answer: 3200

round first: 1699 → 1700, 699 → 700, 799 → 800; 3200

16. Use the distributive property to rewrite each expression.

6(8 + 2)

6(8 + 2) = [ ]
(Type an expression. Do not simplify.)

Answer: 6 • 8 + 6 • 2

6(8+2) = 6·8 + 6·2 =

17. 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. ○ square meters. ○ meters.

(2) ○ cubic meters. ○ meters. ○ square meters.

Answers 40

(1) square meters.

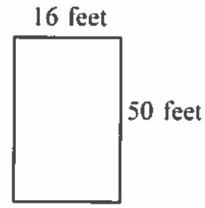
26

(2) meters.

A = LW
A = (8)(5)
A = 40

P = 2L + 2W
P = 2(8) + 2(5)
P = 16 + 10
P = 26

18. 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) ○ feet.
○ cubic feet.
○ square feet.

(2) ○ square feet.
○ feet.
○ cubic feet.

Answers 800

(1) square feet.

132

(2) feet.

19. One triple fudge brownie contains 163 calories. How many calories are in 3 triple fudge brownies?

______ calories

Answer: 489

20. The textbook for a course in biology costs $94. There are 36 students in the class. Find the total cost of the biology books for the class.

The total cost is $______.

Answer: 3,384

21. A plot of land measures 80 feet by 140 feet. Find its area.

The area of the rectangle is ______ (1) ______

(1) ○ cubic feet.
○ feet.
○ square feet.

Answers 11,200

(1) square feet.

22. One ounce of nuts contains 224 calories. How many calories are in 9 ounces of nuts?

[ ] calories

Answer: 2016

$\frac{1}{224} = \frac{9}{N}$ Cross mult

$1(N) = 224(9)$

$N = 2016$

23. A plant for a tea company has bagging machines capable of bagging 3000 bags of tea per minute. If the plant runs 24 hours a day, how many tea bags are produced in one day?

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

Answer: 4,320,000

$T = (3000)(24\text{ hr})$

$T = (3000)(24)(60)$

$T = 4,320,000$

24. Find the quotient.

$\frac{42}{6}$

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

- A. $\frac{42}{6} =$ [ ]
- B. The answer is undefined.

Answer: A. $\frac{42}{6} =$ 7

25. 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.

26. Divide the following and then check by multiplying.

$3\overline{)291}$

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 97.

97
3|291
−(27)
21
−(21)
0 rem

27. Divide the following and then check by multiplying.

$6\overline{)1363}$

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 227 R 1.

227 1/6
6|1365
−(12)
16
−(12)
43
−(42)
1 rem

28. For their wedding, Ben and Jen paid $15 for each guest's dinner. The total bill was $2220. How many guests did they have at their wedding?

_____ guests

Answer: 148

148
15|2220
−(15)
72
−(60)
120
−(120)
0 rem

29. A truck hauls wheat to a storage granary. It carries a total of 4,320 bushels of wheat in 15 trips. How much does the truck haul each trip if each trip it hauls the same amount?

The truck hauls _____ bushels each trip.

Answer: 288

288
15|4320
−(30)
132
120
120
−(120)
0

30. Suppose the elevation of a peak on a certain planet is 26,400 feet. A mile is 5280 feet. How many miles tall is the peak?

The peak is _____ miles tall.

Answer: 5

5
5280|26400
−(26400)
0 rem

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

20, 22, 32, 28, 19, 17

The average value is [ ].

Answer: 23

$\frac{17+19+20+22+28+32}{6} = \frac{138}{6} = 23$

32. Find the value of the expression.

7^2

$7^2 =$ [ ]

Answer: 49

$7^2 = 7 \cdot 7 = 49$

33. Simplify.

$45 + 3 \cdot 4$

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

- A. $45 + 3 \cdot 4 =$ ______
- B. The expression is undefined.

Answer: A. $45 + 3 \cdot 4 =$ 57

PEMDAS

$45 + 3 \cdot 4 = 45 + 12 = 57$

34. Simplify.

$46 + \frac{45}{5}$

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

- A. $46 + \frac{45}{5} =$ ______
- B. The expression is undefined.

Answer: A. $46 + \frac{45}{5} =$ 55

PEMDAS

$46 + \frac{45}{5} = 46 + 9 = 55$

35. Simplify.

$5 \cdot 8 + 9 \cdot 5$

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

- A. $5 \cdot 8 + 9 \cdot 5 =$ _____
- B. The expression is undefined.

Answer: A. $5 \cdot 8 + 9 \cdot 5 =$ 85

PEMDAS

$5 \cdot 8 + 9 \cdot 5 =$
$40 + 9 \cdot 5 =$
$40 + 45 =$
$85 =$

36. Simplify.

$(6 + 7) \cdot (8 - 3)$

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

- A. $(6 + 7) \cdot (8 - 3) =$ _____
- B. The expression is undefined.

Answer: A. $(6 + 7) \cdot (8 - 3) =$ 65

PEMDAS

$(6+7)\cdot(8-3) =$
$(13)\cdot(5) =$
$65 =$

$\begin{array}{r} 1 \\ 13 \\ \times 5 \\ \hline 65 \end{array}$

37. Evaluate the expression for $z = 3$.

$2 + 7z$

$2 + 7z =$ _____

Answer: 23

PEMDAS

$2 + 7z =$
$2 + 7(3) =$
$2 + 21 =$
$23 =$

38. Evaluate the expression for $x = 3$ and $z = 5$.

$5xz - 4x$

$5xz - 4x =$ _____

Answer: 63

PEMDAS

$5xz - 4x =$
$5(3)(5) - 4(3) =$
$5(15) - 4(3) =$
$75 - 12 =$
$63 =$

$\begin{array}{r} 75 \\ \times 5 \\ \hline 75 \end{array}$

$\begin{array}{r} 75 \\ -12 \\ \hline 63 \end{array}$

39. Evaluate the expression for $x = 3$, $y = 2$, and $z = 4$.

$z - x + y$

The answer is _____.

Answer: 3

PEMDAS

$z - x + y =$
$(4) - (3) + (2) =$
$4 - 3 + 2 =$
$1 + 2 =$
$3 =$

40. Evaluate the expression for x = 2 and z = 4.

$5x - z$

$5x - z =$ ____

Answer: 6

$5x - z =$
$5(2) - (4) =$
$10 - 4 =$
$6 =$

PEMDAS

41. Evaluate the algebraic expression for the given value.

$x^2 - 3x + 5$, for x = 7

When x = 7, $x^2 - 3x + 5 =$ ____. (Simplify your answer.)

Answer: 33

$x^2 - 3x + 5 =$
$(7)^2 - 3(7) + 5 =$
$(7)(7) - 3(7) + 5 =$
$49 - 21 + 5 =$
$28 + 5 =$
$33 =$

PEMDAS

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

$n - 6 = 10$; {14, 16, 18}

Try $n = 16$

$n - 6 = 10$
$(16) - 6 = 10$
$16 - 6 = 10$
$10 = 10$
Good

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

- A. ____ in the set {14, 16, 18} is a solution of the equation n − 6 = 10.
- B. None of the numbers in the set are solutions of the equation

Answer: A. 16 in the set {14, 16, 18} is a solution of the equation n − 6 = 10.

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

$5n = 35$; {7, 49, 35}

Try $n = 7$

$5n = 35$
$5(7) = 35$
$35 = 35$
Good

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

- A. ____ in the set {7, 49, 35} is a solution of the equation 5n = 35.
- B. None of the numbers in the set are solutions of the equation.

Answer: A. 7 in the set {7, 49, 35} is a solution of the equation 5n = 35.

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

$6n + 2 = 38$; {0, 4, 6}

PEMDAS

Try $n = 6$

$6n + 2 = 38$
$6(6) + 2 = 38$
$36 + 2 = 38$
$38 = 38$
Good

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

- A. ____ in the set {0, 4, 6} is a solution of the equation 6n + 2 = 38.
- B. None of the numbers in the set are solutions of the equation.

Answer: A. 6 in the set {0, 4, 6} is a solution of the equation 6n + 2 = 38.

45. Simplify.

3 + 5 • 4 − 12

3 + 5 • 4 − 12 = ____

Answer: 11

PEMDAS

3+5•4−12 =
3+20−12 =
23−12 =
11 =

46. Solve. Check your solution.

x + 9 = 16

The solution is x = ____.

Answer: 7

x+9 = 16
x+9−9 = 16−9
x = 7

Check x+9 = 16
(7)+9 = 16
7+9 = 16
16 = 16 Good

47. Solve. Check your solution.

18 = y − 10

The solution is y = ____.

Answer: 28

18 = y−10
18+10 = y−10+10
28 = y

Check 18 = y−10
18 = (28)−10
18 = 28−10
18 = 18 Good

48. Solve.

4x = 32

The solution is x = ____.

Answer: 8

4x = 32
$\frac{4x}{4} = \frac{32}{4}$
x = 8

Check 4x = 32
4(8) = 32
32 = 32
Good

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

x − 9 = −4 + 6

The solution is x = ____.

Answer: 11

x−9 = −4+6
x−9 = 2
x−9+9 = 2+9
x = 11

Check
x−9 = −4+6
(11)−9 = −4+6
11−9 = −4+6
2 = 2 Good

50. Solve the following equation.

2x − 14 = 0

x = ____

Answer: 7

2x−14 = 0
2x−14+14 = 0+14
2x = 14
$\frac{2x}{2} = \frac{14}{2}$
x = 7

Check 2x−14 = 0
2(7)−14 = 0
14−14 = 0
0 = 0
Good

51. Solve the equation.

5n + 15 = 45

n = [ ]

Answer: 6

$5n+15=45$
$5n+15-15=45-15$
$5n=30$
$\frac{5n}{5}=\frac{30}{5}$
$n=6$

Check $5n+15=45$
$5(6)+15=45$
$30+15=45$
$45=45$
Good

52. Find the prime factorization of the following number.

24

The prime factorization of 24 is [ ].

Answer: $2^3 \cdot 3$

Primes 2, 3, 5, 7, 11, 13, ...

2|24
2|12
2|6
3|3
1

$24=2\cdot2\cdot2\cdot3$
OR
$24=2^3\cdot3$

53. Find the prime factorization of the following number.

32

The prime factorization of 32 is [ ].

Answer: 2^5

2|32
2|16
2|8
2|4
2|2
1

Primes 2, 3, 5, 7, 11, 13, 17...
$32=2\cdot2\cdot2\cdot2\cdot2$
OR
$32=2^5$

54. Find the prime factorization of the following number.

195

The prime factorization of 195 is [ ].

Answer: $5 \cdot 3 \cdot 13$

3|195
5|65
13|13
1

Primes 2, 3, 5, 7, 11, 13, 17...
$195=3\cdot5\cdot13$
OR
$195=5\cdot3\cdot13$

55. Divide.

$\frac{4}{9} \div \frac{17}{18}$

Primes 2, 3, 5, 7, 11, 13, 17...

$\frac{4}{9} \div \frac{17}{18} =$

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

$\frac{4}{9}\cdot\frac{18}{17}=$ rewrite

$\frac{2\cdot2}{3\cdot3}\cdot\frac{2\cdot3\cdot3}{17}=$

$\frac{2\cdot2}{3\cdot3}\cdot\frac{2\cdot3\cdot3}{17}$

$\frac{2\cdot2\cdot2}{17}=$

$\frac{8}{17}$

○ A. $\frac{4}{9} \div \frac{17}{18} =$ _____ (Type an integer or a simplified fraction.)

○ B. The answer is undefined.

Answer: A. $\frac{4}{9} \div \frac{17}{18} = \frac{8}{17}$ (Type an integer or a simplified fraction.)

2|4
2|2
1

3|9
3|3
1

2|18
3|9
3|3
1

56. Perform the indicated operation.

$3 \div \frac{4}{15}$

$3 \div \frac{4}{15} =$ [ ] (Simplify your answer.)

Answer: $\frac{45}{4}$

$3 \div \frac{4}{15} =$

$\frac{3}{1} \div \frac{4}{15} =$

$\frac{3}{1} \cdot \frac{15}{4} =$ rewrite

$\frac{3}{1} \cdot \frac{3 \cdot 5}{2 \cdot 2} = \frac{3 \cdot 3 \cdot 5}{2 \cdot 2} = \frac{45}{4}$

Primes 2, 3, 5, 7, 11, 13, 17, ...

3 | 15, 5 | 5, 1

4 | 4, 2 | 2, 1

57. Perform the indicated operation.

$\frac{4}{7} \div \frac{11}{35}$

$\frac{4}{7} \div \frac{11}{35} =$ [ ] (Type an integer or a simplified fraction.)

Answer: $\frac{20}{11}$

$\frac{4}{7} \div \frac{11}{35} =$

$\frac{4}{7} \cdot \frac{35}{11} =$ rewrite

$\frac{2 \cdot 2}{7} \cdot \frac{5 \cdot 7}{11} = \frac{2 \cdot 2 \cdot 5}{11} = \frac{20}{11}$

Primes 2, 3, 5, 7, 11, 13, 17, ...

4 | 4, 2 | 2, 1

5 | 35, 7 | 7, 1

58. Find $\frac{1}{5}$ of 190.

$\frac{1}{5}$ of 190 is [ ]. (Simplify your answer. Type a whole number, fraction, or mixed number.)

Answer: 38

$\frac{1}{5} \cdot \frac{190}{1} = \frac{190}{5}$

38

5 | 190

(15)

40

−(40)

0

59. Find $\frac{3}{4}$ of 16. Write the answer in simplest form.

$\frac{3}{4}$ of 16 is [ ]. (Simplify your answer.)

Answer: 12

$\frac{3}{4} \cdot \frac{16}{1}$

$\frac{3}{2 \cdot 2} \cdot \frac{2 \cdot 2 \cdot 2 \cdot 2}{1}$

$\frac{3 \cdot 2 \cdot 2}{1} = \frac{12}{1} = 12$

Primes 2, 3, 5, 7, 11, 13, 17, ...

4 | 16, 2 | 8, 2 | 4, 2 | 2, 1

4 | 4, 2 | 2, 1

60. A special on a cruise to the South Pole is advertised as being $\frac{7}{8}$ of the regular price. If the regular price is $1624, what is the sale price?

The sale price is $[ ]. (Type an integer or a simplified fraction.)

Answer: 1421

$\frac{7}{8} \cdot \frac{1624}{1} =$

203

8 | 1624

−(16)

24

−(24)

0

$\frac{7(1624)}{8} = 7(203) = 1421$

61. Add and simplify.

$\frac{5}{12} + \frac{1}{12}$

$\frac{5}{12} + \frac{1}{12} =$ ☐ (Type an integer or a simplified fraction.)

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

Primes 2, 5, 7, 11, 13, ...

$\frac{5}{12} + \frac{1}{12} =$

$\frac{5+1}{12} =$

$\frac{6}{12} =$

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

$\frac{1}{2} =$

62. Add and simplify.

$\frac{2}{5} + \frac{3}{10}$

$\frac{2}{5} + \frac{3}{10} =$ ☐ (Type an integer or a fraction.)

Answer: $\frac{7}{10}$

LCD = 10

$\frac{2}{5} + \frac{3}{10} =$

$\frac{2}{5}\left(\frac{2}{2}\right) + \frac{3}{10} =$

$\frac{4}{10} + \frac{3}{10} =$

$\frac{4+3}{10} =$

$\frac{7}{10} =$

63. Perform the indicated operation.

$\frac{1}{2} - \frac{1}{7}$

$\frac{1}{2} - \frac{1}{7} =$ ☐ (Type a whole number or a simplified fraction.)

Answer: $\frac{5}{14}$

LCD = 14

$\frac{1}{2} - \frac{1}{7} =$

$\frac{1}{2}\left(\frac{7}{7}\right) - \frac{1}{7}\left(\frac{2}{2}\right) =$

$\frac{7}{14} - \frac{2}{14} =$

$\frac{7-2}{14} =$

$\frac{5}{14} =$

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

0.76 0.79

0.76 ☐ 0.79

Answer: <

0.76 < 0.79

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

2.397 2.4

2.397 ☐ 2.4

Answer: <

2.397 < 2.400

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

0.88200 0.882

0.88200 ☐ 0.882

Answer: =

0.88200 = 0.88200

67. Round the decimal to the nearest tenth.

0.15

0.15 rounded to the nearest tenth is ☐.

Answer: 0.2

0.15 = since 5 ≥ 5 round up

0.2 =

68. Round the decimal to the nearest ten.

57,945.215

57,945.215 rounded to the nearest tens place is ☐.

Answer: 57,950

57945.215 since 5 ≥ 5 round up

57950 =

69. Round 0.3469 to the nearest thousandth.

0.3469 ≈ ☐

Answer: 0.347

0.3469 since 9 ≥ 5 round up

0.347

70. Round 4.87162434 to the nearest tenth.

4.87162434 rounded to the nearest tenth is ☐.

Answer: 4.9

4.87162434 since 7 ≥ 5 round up

4.9 =

71. Round the monetary amount to the nearest dollar.

$90.21

$90.21 rounded to the nearest dollar is $☐.

Answer: 90

$90.21 since 2 < 5 don't round up

$90.

72. Round $0.8524 to the nearest cent.

$0.8524 rounded to the nearest cent is $ [ ].

Answer: 0.85

$0.8524 ↑ since 2 < 5 do not round up

$0.85

73. A used biology textbook is priced at $57.43. Round this price to the nearest dollar.

$57.43 rounded to the nearest dollar is $ [ ].

Answer: 57

$57.43 ↑ since 4 < 5 do not round up

$57

74. Write as a decimal.

$5\frac{21}{100}$

$5\frac{21}{100}$ = [ ]

Answer: 5.21

$5\frac{21}{100} =$

$5 + \frac{21}{100} =$

$5 + .21 =$

$5.21 =$

$100\overline{)21.00}$ $.21$

$-(200)$

100

$-(100)$

0

75. Add the following.

8.5 + 4.12

8.5 + 4.12 = [ ] (Type an integer or a decimal.)

Answer: 12.62

8.50 rewrite

$+ 4.12$

12.62

76. Find the sum of 37, 9.006, and 6.701.

The sum is [ ].

Answer: 52.707

37.000

9.006

$+ 6.701$

52.707

77. Subtract and check.

5.7 − 2.5

5.7 − 2.5 = [ ]

Answer: 3.2

5.7

-2.5

3.2

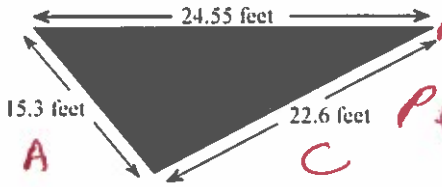
78. Subtract and check the following.

17 − 1.8

17 − 1.8 = ☐ (Type an integer or a decimal.)

Answer: 15.2

79. A landscape architect is planning a border for a flower garden shaped like a triangle. The sides of the garden measure 15.3 feet, 24.55 feet, and 22.6 feet. Find the amount of border material needed.

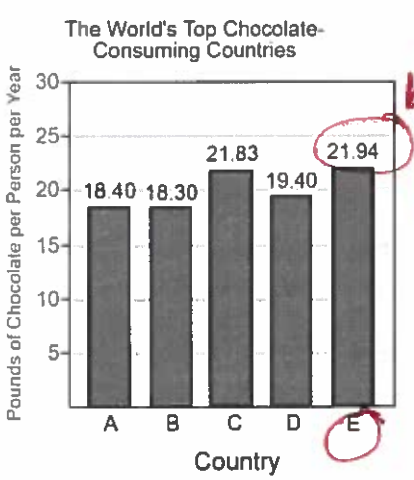


The amount of border material needed is ☐ feet.
(Type an integer or a decimal.)

Answer: 62.45

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

Which country has the greatest chocolate consumption per person?

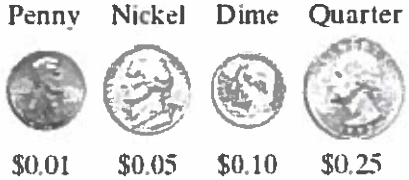


Choose the correct answer below.

- (●) Country E
- ( ) Country B
- ( ) Country D
- ( ) Country A
- ( ) Country C

Answer: Country E

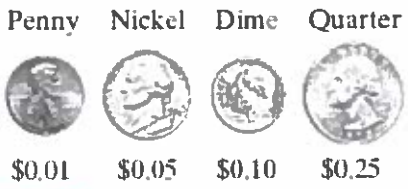
81. Use the values of the coins given below. Write the value of the group of coins shown to the right. To do so, it is usually easiest to start with the coin(s) of greatest value and end with the coin(s) of least value.



The total value of the group is $ ☐.

Answer: 0.95

82. 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.



Choose the correct answer below. Select all that apply.

- [x] A. 1 dime and 1 nickel
- [ ] B. 3 nickels and 5 pennies
- [x] C. 3 nickels
- [x] D. 1 dime and 5 pennies
- [x] E. 2 nickels and 5 pennies
- [ ] F. 1 dime, 3 nickels and 5 pennies

Answer: A. 1 dime and 1 nickel, C. 3 nickels, D. 1 dime and 5 pennies, E. 2 nickels and 5 pennies

83. Multiply.

0.19×6

$0.19 \times 6 =$ ☐ (Type an integer or a decimal.)

Answer: 1.14

84. Multiply.

8.7×0.5

$8.7 \times 0.5 =$ ☐ (Type an integer or a decimal.)

Answer: 4.35

85. Multiply.

0.587×0.4

$0.587 \times 0.4 =$ ☐

Answer: 0.2348

86. Multiply.

5.4 × 0.001

5.4 × 0.001 = ☐

Answer: 0.0054

5.4
× 0.001
54
0.0054

87. Multiply.

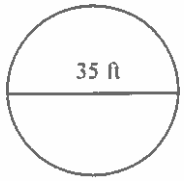
8.7 × 0.12

8.7 × 0.12 = ☐

Answer: 1.044

8.7
× 0.12
174
87
1.044

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



D = 35

C = πD
C = π(35)
C = 35π

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.)

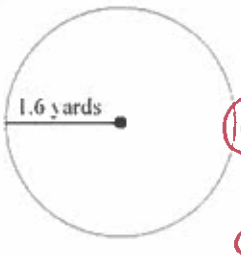
C = 3.14D
C = 3.14(35)
C = 109.90

Answers 35π

109.90

1
2
3.14
× 35
1570
942
109.90

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



$C = 2\pi R$ $R = 1.6$ $C = 2\pi(1.6)$ $C = 3.2\pi$ $C = 2(3.14)(1.6)$ $C = 10.048$

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.)

$3.14 \times 2 = 6.28$ $6.28 \times 1.6 = 10.048$

Answers 3.2π

10.048

90. A 1-ounce serving of cream cheese contains 8.7 grams of saturated fat. How much saturated fat is in 5 ounces of cream cheese?

[ ] g

$\frac{1}{8.7} = \frac{5}{N}$ $1(N) = 8.7(5)$ (cross Mult) $N = 43.5$ $8.7 \times 5 = 43.5$

Answer: 43.5

91. The screen of a portable digital device is a rectangle that measures 4.5 inches by 3.4 inches. Find the area of the screen.

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

$A = LW$ $A = (4.5)(3.4)$ $A = 15.3$ $4.5 \times 3.4 = 15.30$

Antwort: 15.3

92. The diameter of a ferris wheel is 170 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.)

$C = \pi D$ $C = 3.14D$ $C = \pi(170)$ $C = 3.14(170)$ $C = 170\pi$ $C = 533.80$

Antworten 170π

533.80

93. A meter is a unit of length approximately equal to 39.37 inches. If someone is 1.68 meters tall, what is his or her approximate height in inches?

Using the given conversion, someone who is 1.68 meters tall has a height of [ ] inches.
(Type an integer or a decimal.)

Antwort: 66.1416

$\frac{1}{39.37} = \frac{1.68}{N}$

$1(N) = 39.37(1.68)$

$N = 66.1416$

94. One year, farmers received an average of $12.125 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.)

Antwort: 1212.50

12.125
× 100
000000
00000
12125
1212.500

95. Divide.

$4\overline{)21.6}$

The quotient is [ ].
(Type an integer or a decimal.)

Antwort: 5.4

5.4
4 | 21.6
−(20)
16
−(16)
0 rem

96. Divide.

$8\overline{)0.28}$

The quotient is [ ].
(Type an integer or a decimal.)

Antwort: 0.035

0.035
8 | 0.280
−(24)
40
−(40)
0 rem

97. Divide.

$0.04\overline{)12}$

The quotient is [ ].
(Type a whole number or a decimal.)

Answer: 300

300.
0.04 | 12.00.
−(12)
00
00
0

98. Divide.

$0.87\overline{)5.046}$

The quotient is [ ].
(Type an integer or a decimal.)

Answer: 5.8

5.8
0.87 | 5.046
435
696
−(696)
0 rem

99. Divide.

$0.05\overline{)55}$

The quotient is _____. (Type a whole number or a decimal.)

Answer: 1100

1100.
0.05 ⟌ 5500.
−(5)
5
−(5)
00
00
0

100. Find the decimal equivalent of the following fraction.

$\frac{13}{20}$

$\frac{13}{20}$ = ☐

Answer: 0.65

0.65
20 ⟌ 13.00
−(120)
100
−(100)
0 rem

101. Write as an equivalent decimal.

$\frac{3}{4}$

$\frac{3}{4}$ = ☐

Answer: 0.75

0.75
4 ⟌ 3.00
(28)
20
−(20)
0 rem

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

$2\frac{7}{20}$ = ☐

Answer: 2.35

$2\frac{7}{20}$ =
$2 + \frac{7}{20}$ =
2 + .35 =
2.35 =

.35
20 ⟌ 7.00
−(60)
100
−(100)
0 rem

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

27, 22, 19, 17, 30 → 17, 19, 22, 27, 30

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.

$\frac{17+19+22+27+30}{5} =$ median = 22

$\frac{115}{5} =$ 23 = Mean

There is no mode

Answers 23

22

B. There is no mode.

104. A stereo normally priced at $780 is on sale for 10% off. Find the discount and the sale price.

The discount is $____.

The sale price is $____.

$A = P - PD$

$A = \$780 - \$780(.10)$

$A = \$780 - \$78.00$ ← discount

$A = \$702.00$ ← Sale Price

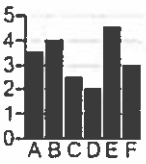
Answers 78.00

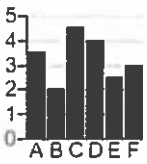
702.00

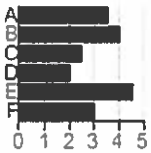
105. Use the information given to draw a vertical bar graph.

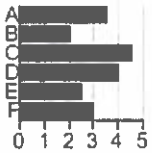
Fiber Content of Selected Foods	
Food	**Grams of Total Fiber**
A	3.5
B	4.0
C	2.5
D	2.0
E	4.5
F	3.0

Choose the correct graph below.

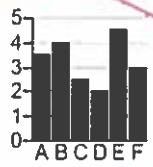
A. 

B. 

C. 

D. 

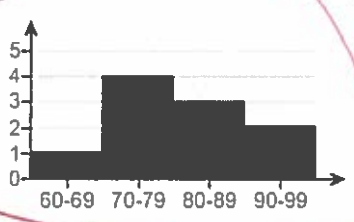
Answer:

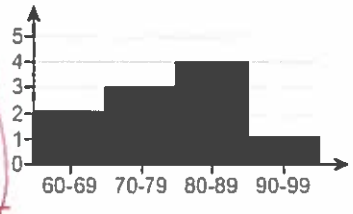
A. 

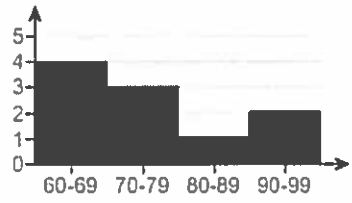
106. The frequency distributition of the golf scores for an amateur golfer is shown on the right. Use the frequency distribution to construct a histogram.

Class Intervals (Scores)	Class Frequency (Number of Games)
60-69	1
70-79	4
80-89	3
90-99	2

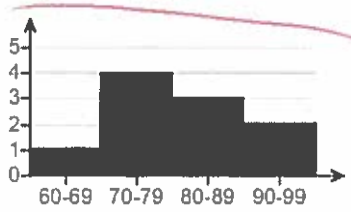
Which graph below is the correct histogram?

A. 

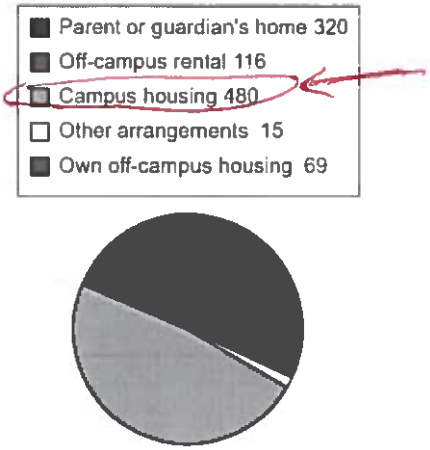
B. 

C. 

Answer:

A. 

107. The circle graph is a result of surveying 1000 college students. They were asked where they live while attending college. Use this graph to find where most of these college students live.

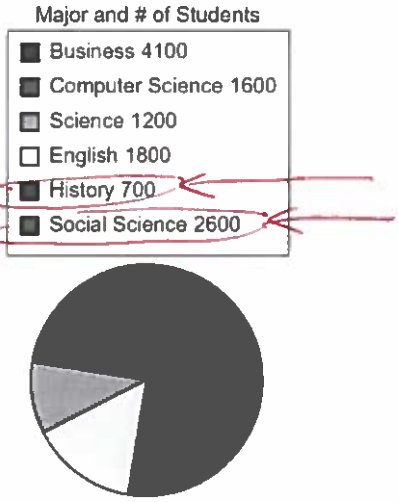


Choose the correct answer below.

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

Answer: A. Campus housing

108. The circle graph shows the number of students at Rockford College who are enrolled in various majors. Find the ratio of History majors to Social Science majors.

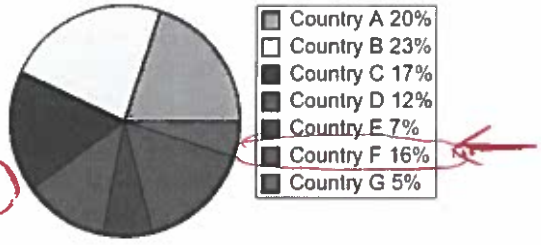


700/2600 = 7(100)/26(100) = 7/26

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

Answer: 7/26

109. The total amount of land of some particular countries is approximately 61,000,000 square miles. Use the graph to find the area of the Country F.

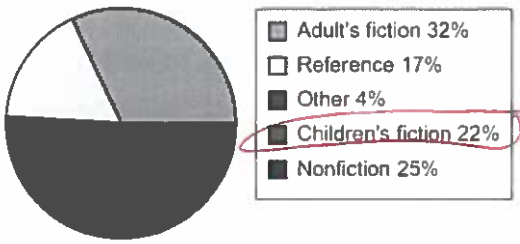


61,000,000 × .16 = 9,760,000

The area of the Country F is approximately _____ square miles.

Answer: 9,760,000

110. The circle graph to the right shows the percent of the types of books available in a library.



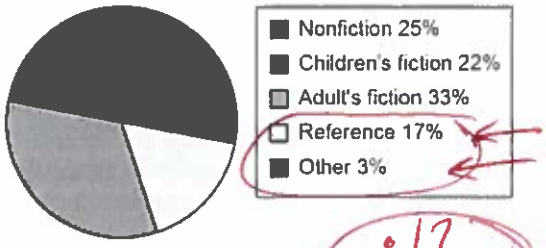
If the library has 122,000 books, find how many books are classified as Children's fiction.

122000
x .22
26,840

The number of books classified as Children's fiction is ____.
(Type a whole number.)

Answer: 26,840

111. If this library has 213,000 books, find how many books are in the category of reference or other?



213000
x .20
42,600

.17
+.03
.20

The number of books in the reference or other category is ____ books.

Answer: 42,600

112. Find the square root.

$\sqrt{49}$

$\sqrt{49} =$ ____

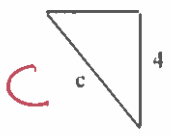
49 = 7²

√49 =

7

Answer: 7

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



A² + B² = C²
(3)² + (4)² = C²
9 + 16 = C²
25 = C²
√25 = √C²
5 = C

The length of the third side is ____.

Answer: 5

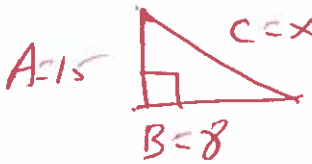
114. Sketch the right triangle and find the length of the side not given. If necessary, approximate the length to the nearest thousandth.

leg = 15, leg = 8

What is the length of the side not given?

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

Answer: 17



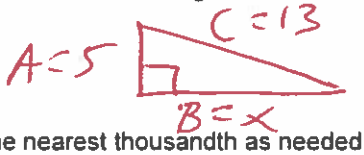
$A^2+B^2=C^2$
$(15)^2+(8)^2=C^2$
$225+64=C^2$
$289=C^2$
$\sqrt{289}=\sqrt{C^2}$
$17=C$

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

leg = 5, hypotenuse = 13

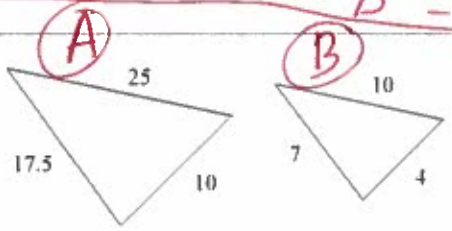
The unknown length is [ ].
(Type an integer or decimal rounded to the nearest thousandth as needed.)

Answer: 12



$A^2+B^2=C^2$
$(5)^2+B^2=(13)^2$
$25+B^2=169$
$25+B^2-25=169-25$
$B^2=144$
$\sqrt{B^2}=\sqrt{144}$
$B=12$

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

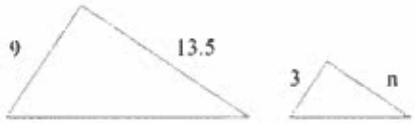


$\frac{A}{B}=\frac{25}{10}=\frac{5(5)}{5(2)}=\frac{5}{2}$

The ratio of the corresponding sides of the first triangle to the second triangle is [ ].
(Type the ratio as a simplified fraction.)

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

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

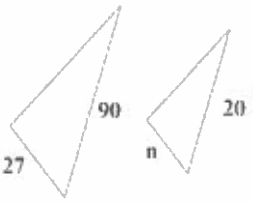


n = [ ]

Answer: 4.5

$\frac{9}{13.5}=\frac{3}{n}$
$9(n)=13.5(3)$
$9n=40.5$
$\frac{9n}{9}=\frac{40.5}{9}$
$n=4.5$

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



$\frac{27}{90} = \frac{n}{20}$

Cross Mult

$27(20) = 90(N)$

$540 = 90N$

$\frac{540}{90} = \frac{90N}{90}$

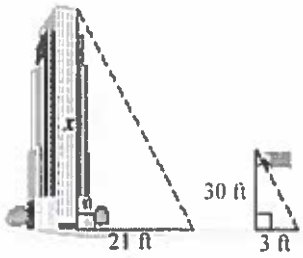
$6 = N$

$90\overline{)540}$ 6, $-(540)$, 0 Rem

n = [ ]

Answer: 6

119. 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.



$\frac{x}{21} = \frac{30}{3}$

Cross Mult

$3(x) = 21(30)$

$3x = 630$

$\frac{3x}{3} = \frac{630}{3}$

$x = 210$

$3\overline{)630}$ 210, $-(6)$, 3, $-(3)$, 0, 0, 0

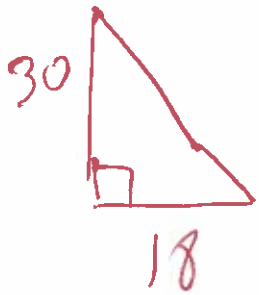
The height of the building is [ ] feet.

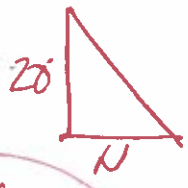
Answer: 210

120. If a 30-foot tree casts an 18-foot shadow, find the length of the shadow cast by a 28-foot tree.

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

Answer: 16.8





$\frac{30}{18} = \frac{28}{N}$

Cross Mult

$30(N) = 18(28)$

$30N = 504$

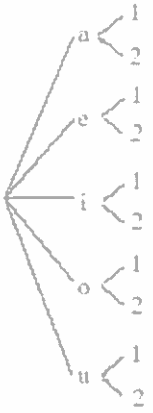
$\frac{30N}{30} = \frac{504}{30}$

$N = 16.8$

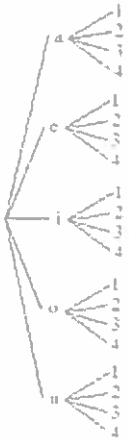
$30\overline{)504.0}$ 16.8, $-(30)$, 204, $-(180)$, 240, $-(240)$, 0 Rem

121. 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.

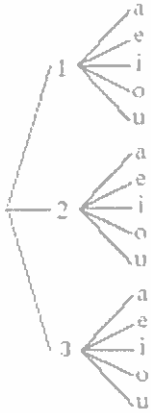
○ A.



○ B.



○ C.



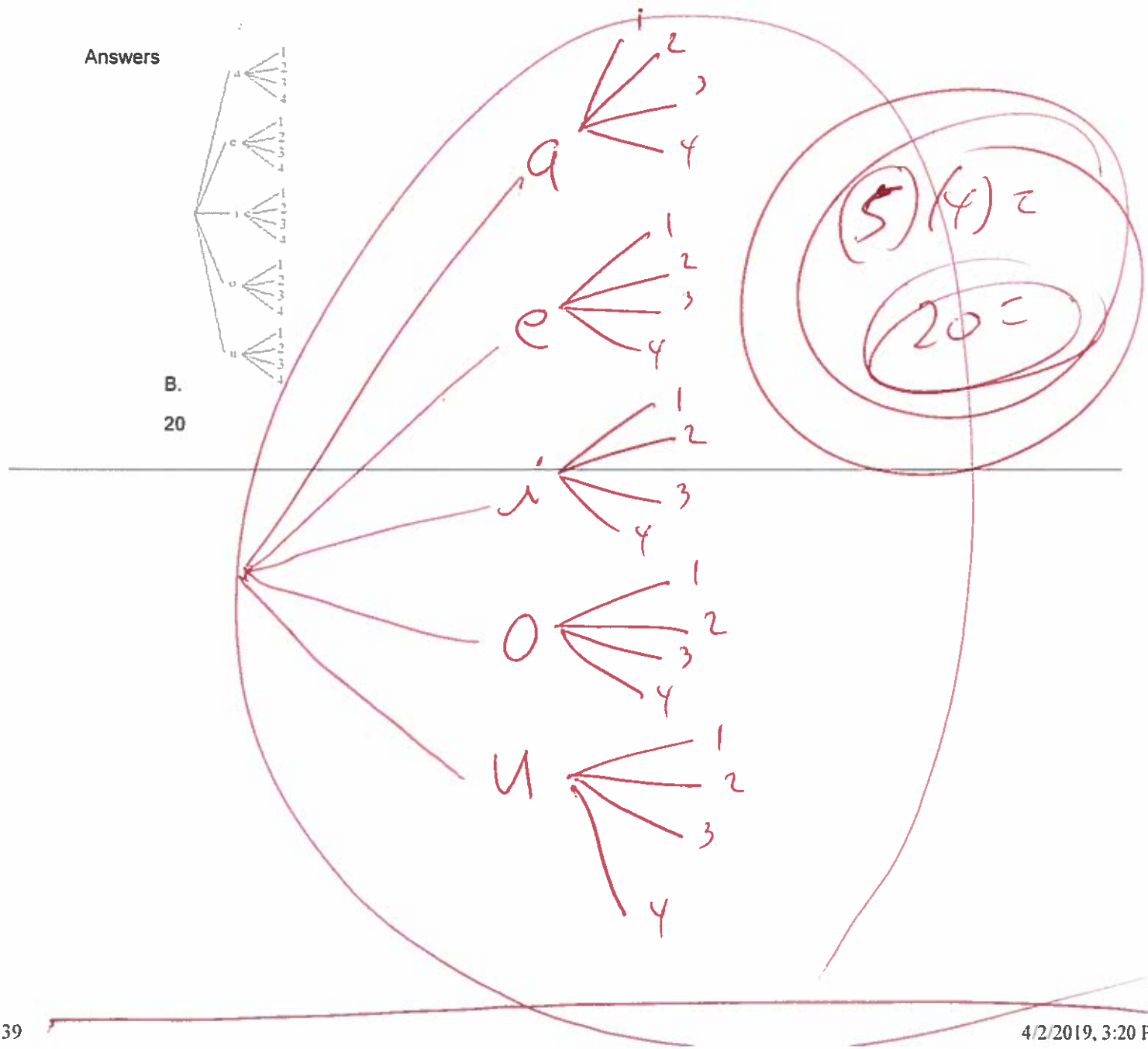
○ D.

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

Answers

B.

20

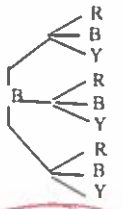


122. Draw a tree diagram for spinning Spinner A 1 time. Use the diagram to find the number of possible outcomes.

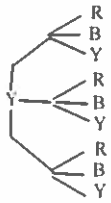
Spinner A

Choose the correct tree diagram below.

A.

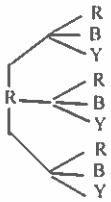


B.



C.

D.

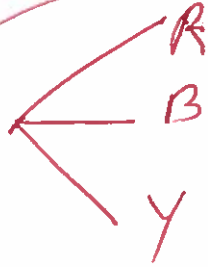


Based on the tree, what is the number of possible outcomes?

Answers

C.

3



123. If a single 6-sided die is tossed once, find the probability of rolling an even number.

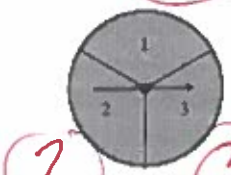
The probability is ____. (Type an integer or a simplified fraction.)

1, 2, 3, 4, 5, 6

$\frac{3}{6} = \frac{3(1)}{3(2)} = \frac{1}{2}$

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

124. Suppose the spinner shown is spun once. Find the probability of spinning 1.



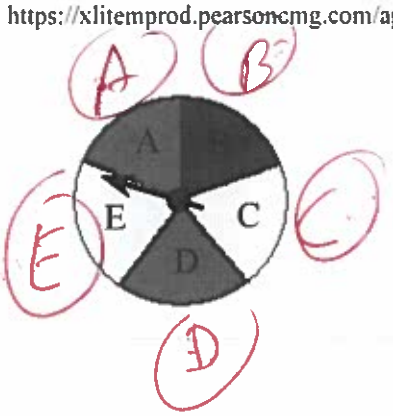
1 2 3

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

$\frac{1}{3} =$

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

125. Suppose that the spinner shown is spun once. Find the probability of the event that the result of a spin is A, B, C, D, or E.



$\frac{1+1+1+1+1}{5} = \frac{5}{5} = 1 =$

The probability is ____.
(Simplify your answer.)

Answer: 1

126. A marble is selected at random from a jar containing 2 red marbles, 3 yellow marbles, and 6 green marbles.

What is the probability that the marble is red?

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

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

$\frac{\text{red}}{\text{red}+\text{yellow}+\text{green}} = \frac{2}{2+3+6} = \frac{2}{11}$

127. Find the perimeter of the following figure.

W 8 ft Rectangle 13 ft L

$P = 2L + 2W$
$P = 2(13) + 2(8)$
$P = 26 + 16$
$P = 42$

PEMDAS

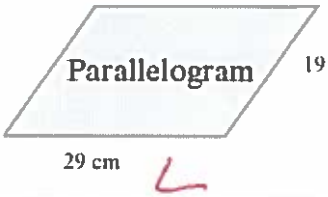
Perimeter = ____ (1) ____

(1) ○ ft
○ sq. ft

Answers 42

(1) ft

128. Find the perimeter of the following figure.



$P = 2L + 2W$
$P = 2(29) + 2(19)$
$P = 58 + 38$
$P = 96$

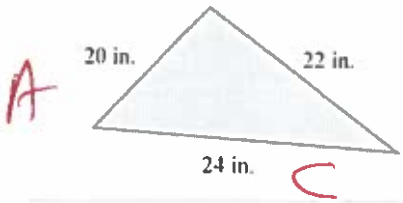
Perimeter = _____ (1) _____

(1) ○ sq. cm
○ cm

Answers 96

(1) cm

129. Find the perimeter of the following figure.



$P = A + B + C$
$P = 20 + 22 + 24$
$P = 42 + 24$
$P = 66$

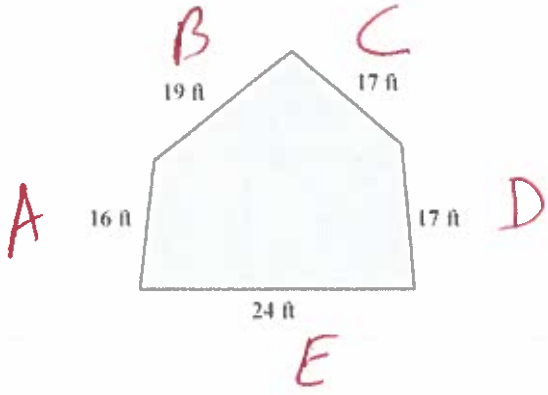
The perimeter is _____ (1) _____

(1) ○ in.
○ sq. in.

Answers 66

(1) in.

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



$P = A+B+C+D+E$

$P = 16+19+17+17+24$

$P = 93$

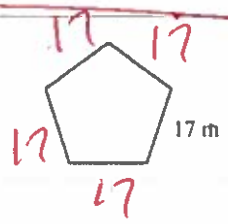
Perimeter = [ ] (1) [ ]

(1) ○ sq. ft.
○ ft.

Answers 93

(1) ft.

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



$P = 5w$

$P = 5(17)$

$P = 85$

3
17
× 5
85

Perimeter = [ ] (1) [ ]

(1) ○ sq m
○ m

Answers 85

(1) m

132. A computer has shape of a rectangular solid. Find the volume of the computer, with dimensions of 2 inches by 2 inches by 2.9 inches.

L W H

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

$V = LWH$

$V = (2)(2)(2.9)$

$V = 4(2.9)$

3
2.9
× 4
11.6

$V = 11.6$

(1) ○ cu in.
○ in.
○ sq in.

Answers 11.6

(1) cu in.

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

8 6

8 ____ 6

Answer: >

8 > 6

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

5.73 ? 5.73

5.73 ____ 5.73

Answer: =

5.73 = 5.73

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

0 __ 3

0 (1) ____ 3

(1) ○ >
○ =
○ <

Answer: (1) <

0 < 3

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

(17 + a) + 17

(17 + a) + 17 = ____

Answer: a + 34

(17 + a) + 17 =

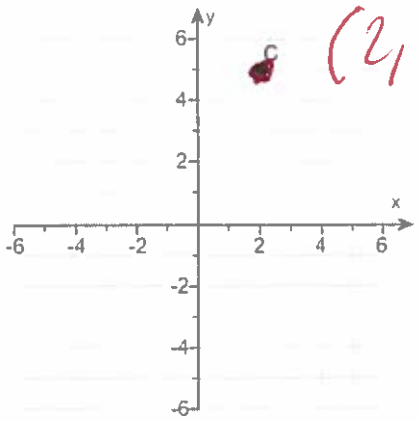
17 + a + 17 =

a + 17 + 17 =

a + 34 =

17
+17
34

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



(2, 5)

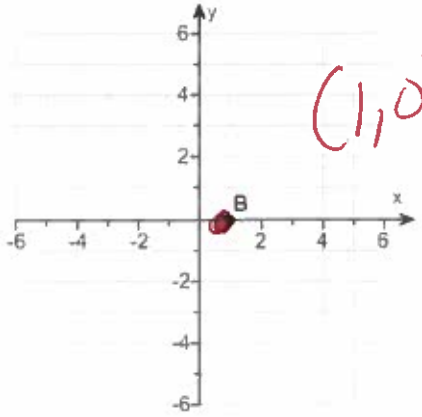
The coordinates of C are ____.
(Type an ordered pair.)

(2, 5)

right 2, up 5

Answer: (2,5)

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



(1,0)

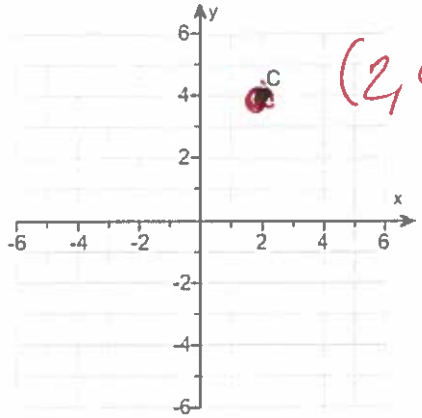
The coordinates of B are ____.
(Type an ordered pair.)

(1, 0)

right 1, up 0

Answer: (1,0)

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



(2,4)

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

(2, 4)

right 2, up 4

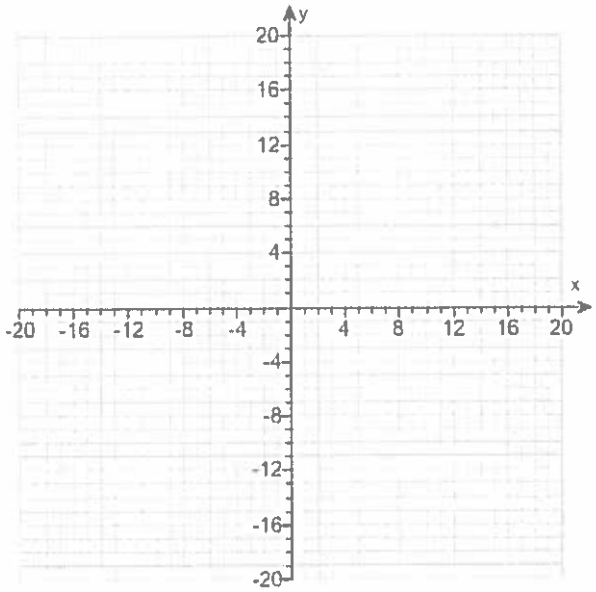
Answer: (2,4)

140.

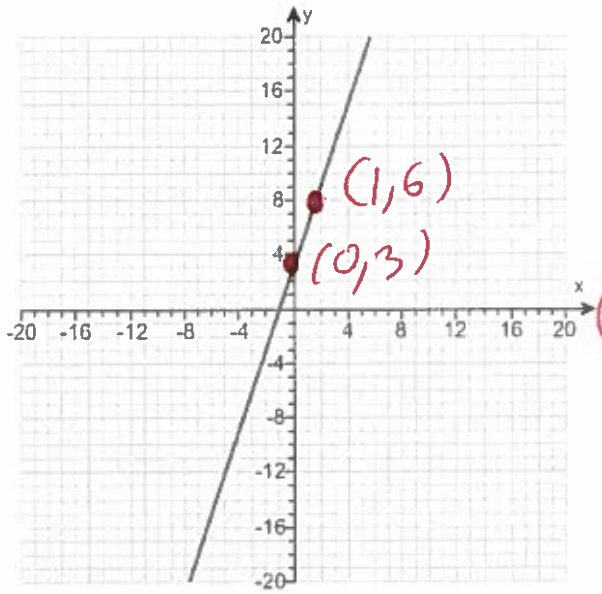
Graph the equation.

$y = 3x + 3$

Use the graphing tool to graph the line.



Answer:



$y = 3x + 3$

$y = 3(0) + 3$

$y = 0 + 3$

$y = 3$

$y = 3(1) + 3$

$y = 3 + 3$

$y = 6$

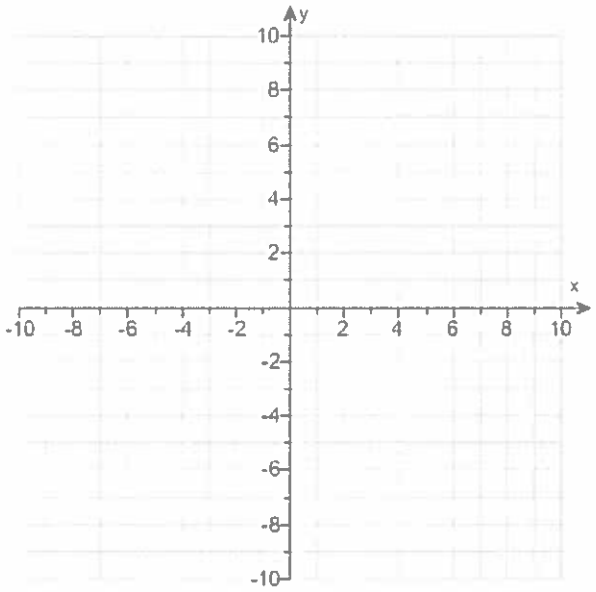
x	y
0	3
1	6

141.

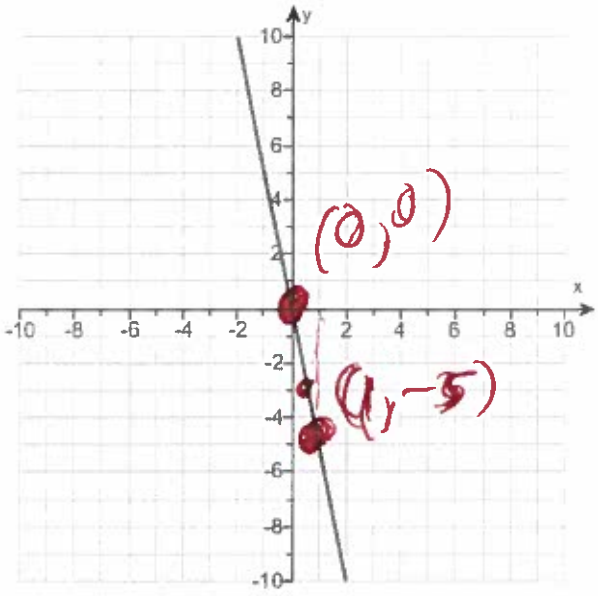
Graph the linear equation.

$y = -5x$

Use the graphing tool to graph the linear equation.



Answer:



$y = -5x$

$y = -5(0)$

$y = 0$

$y = -5(1)$

$y = -5$

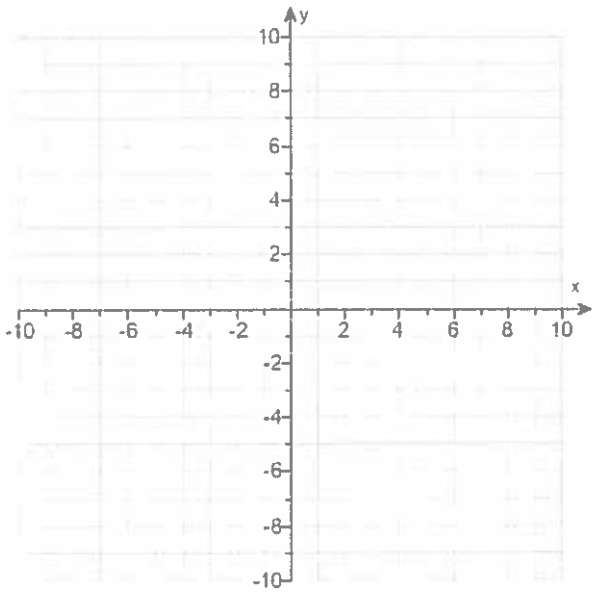
x	y
0	0
1	-5

142.

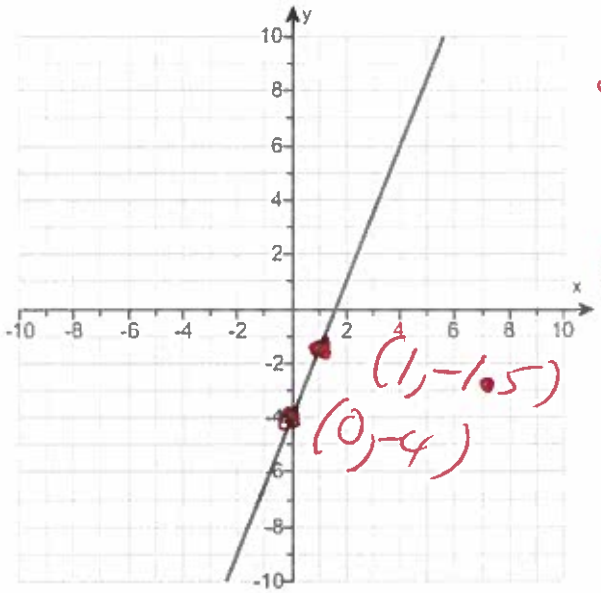
Graph the linear equation.

$y = 2.5x - 4$

Use the graphing tool to graph the equation.



Answer:



$y = 2.5x - 4$

$y = 2.5(0) - 4$

$y = 0 - 4$

$y = -4$

x	y
0	-4
1	-1.5

$y = 2.5(1) - 4$

$y = 2.5 - 4$

$y = -1.5$

143. Given the following function, find f(− 1), f(0), and f(4).

$f(x) = 5x + 5$

f(− 1) = ____

f(0) = ____

f(4) = ____

$f(-1) = 5(-1) + 5$
$f(-1) = -5 + 5$
$f(-1) = 0$

$f(0) = 5(0) + 5$
$f(0) = 0 + 5$
$f(0) = 5$

$f(4) = 5(4) + 5$
$f(4) = 20 + 5$
$f(4) = 25$

Answers 0

5

25

144. Graph the function.

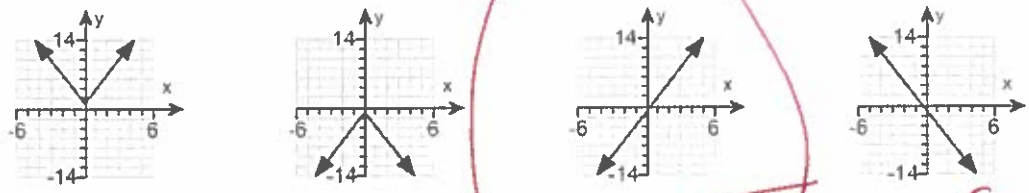
$f(x) = 3x - 1$

Choose the correct graph below.

$f(x) = 3x - 5$

x	f(x)
0	−5
1	−2

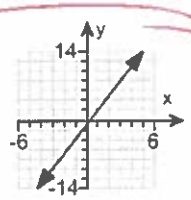
○ A. ○ B. ● C. ○ D.



$f(0) = 3(0) - 5$
$f(0) = 0 - 5$
$f(0) = -5$

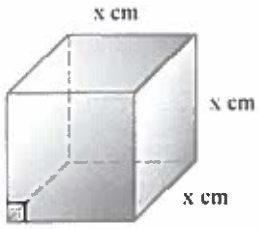
$f(1) = 3(1) - 5$
$f(1) = 3 - 5$
$f(1) = -2$

Answer:



C.

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 6 centimeters.



$V(x) = x^3$
$V(6) = (6)^3$
$V(6) = (6)(6)(6)$
$V(6) = 36(6)$

$\begin{array}{r} 6 \\ \times\ 6 \\ \hline 36 \end{array}$

$\begin{array}{r} 36 \\ \times\ 6 \\ \hline 216 \end{array}$

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

$V(6) = 216$

Answer: 216