Student: _____ Instructor: Alfredo Alvarez Assignment: MATH3RDGRADEWARMUP149L
Date: _____ Course: Math 0410 / 0320 Alvarez

02-11-19
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1. Determine the place value of the digit 5 in the whole number.

805

Choose the correct answer below.

- ○ Hundreds
- ○ Ones
- ○ Tens
- ○ Thousands

Answer: Ones

805
ones

2. Determine the place value of the digit 7 in the whole number 7025.

Choose the correct answer below.

- ○ tens
- ○ hundreds
- ○ thousands
- ○ ones

Answer: thousands

7025
thousands

3. Write the whole number in expanded form.

9570

9570 = [ ] (Type your answer using plus signs.)

Answer: 9000 + 500 + 70

9570 =
9(1000) + 5(100) + 7(10) + 0(1) =
OR
9000 + 500 + 70 =

4. The table shows the number of calories burned during 30 minutes of exercise and how the number of calories burned varies according to the weight of the person doing the exercise. For a person weighing 100 pounds, how many calories will be burned during 30 minutes of moderate jogging?

Activity	100 lb	120 lb
Moderate jogging	285	342
Moderate walking	100	120
Moderate cycling	124	149
Aerobic dance	182	218
Racquetball	194	233
Tennis	143	172

[ ] calories

Answer: 285

285 Calories
moderate jogging

5.

The table shows the number of calories burned during 30 minutes of exercise and how the number of calories burned varies according to the weight of the person doing the exercise. For a person weighing 150 pounds, which activity burns the fewest calories?

Activity	110 lb	150 lb
Moderate jogging	311	425
Moderate walking	110	150
Moderate cycling	134	183
Aerobic dance	193	263
Racquetball	218	297
Tennis	163	222

Choose the correct answer below

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

Answer: C. Moderate walking

6.

The table shows the five longest rivers in the world.

Use the table to determine which river is the longest in the world.

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

Which river is the longest in the world?

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

Answer: Nile

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

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

The (1) [ ] has a greater average weight.

Top Ten Popular Breeds of Dogs

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

greater average weight

(1) ○ Labrador retriever
○ Boxer

Labrador retriever has greater average weight 75

Answer: (1) Labrador retriever

8. Add.

14 + 83

The sum is [ ].

83
+ 14
97

Answer: 97

9. Add.

81
+ 316

81
+ 316
[ ]

81
+ 316
397

Answer: 397

10. Add.

$$\begin{array}{r} 14 \\ 22 \\ +\ 31 \\ \hline \end{array}$$

The sum is ☐.

Answer: 67

11. Subtract. Check by adding.

$$\begin{array}{r} 549 \\ -\ 449 \\ \hline \end{array}$$

The difference is ☐.

Answer: 100

12. Subtract.

$$\begin{array}{r} 66 \\ -\ 38 \\ \hline \end{array}$$

The difference is ☐.

Answer: 28

13. Subtract. Check by adding.

$$\begin{array}{r} 733 \\ -\ 357 \\ \hline \end{array}$$

The difference is ☐.

Answer: 376

14. Subtract.

$$\begin{array}{r} 900 \\ -\ 316 \\ \hline \end{array}$$

The difference is ☐.

Answer: 584

15. Subtract. Check by adding.

442
− 36

The difference is ____.

Answer: 406

$\overset{3}{4}\overset{12}{4}2 - 36 = 406$

Check: $406 + 36 = 442$ Good

16. Subtract.

85 − 77

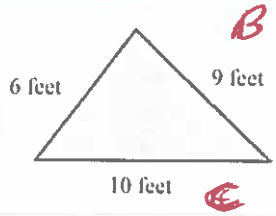
The answer is ____.

Answer: 8

$\overset{7}{8}\overset{15}{5} - 77 = 8$

Check: $77 + 8 = 85$ Good

17. Find the perimeter of the figure.



The perimeter is ____ feet.

Answer: 25

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

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

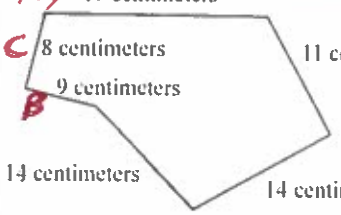
18. Find the perimeter of the figure.

____ ft

Answer: 6

$W = 1$
$L = 2$
$P = 2L + 2W$
$P = 2(2) + 2(1)$
$P = 4 + 2$
$P = 6$

19. Find the perimeter of the figure.



____ cm

Answer: 75

$P = A + B + C + D + E + F$
$P = 14 + 9 + 8 + 19 + 11 + 14$
$P = 23 + 8 + 19 + 11 + 14$
$P = 31 + 19 + 11 + 14$
$P = 50 + 11 + 14$
$P = 61 + 14$
$P = 75$

$14 + 9 = 23$ | $23 + 8 = 31$ | $31 + 19 = 50$ | $50 + 11 = 61$

$61 + 14 = 75$

20. Find the total of 55, 44, 7, 19, and 245.

The total is [ ].

Answer: 370

21. Find the difference of 68 and 39.

The difference is [ ].

Answer: 29

22. What is 645 increased by 83?

645 increased by 83 is [ ].

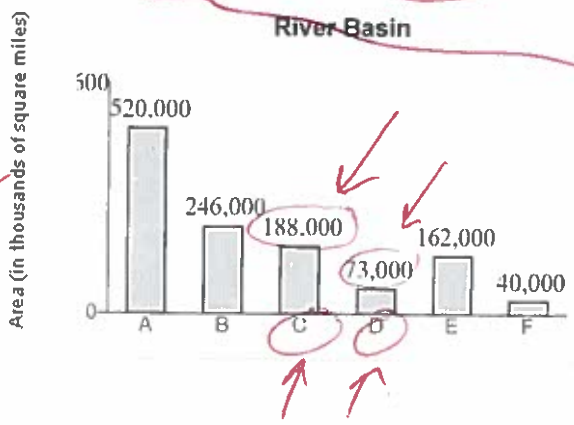
Answer: 728

23. A new notebook computer with DVD player costs $1423. Derik Muller has $1499 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: 76

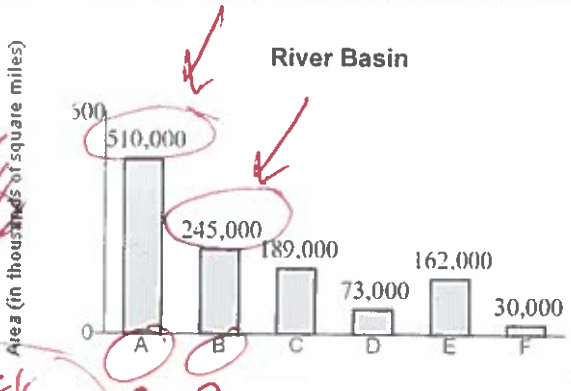
24. Find the total land area drained by the C and D sub-basins.



[ ] sq mi

Answer: 261,000

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



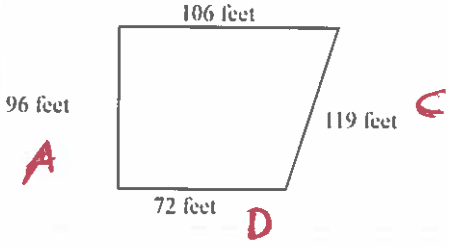
Subtract
510000
−245000
265,000

Check
265000
+245000
510,000
Good

[ ] sq mi

Answer: 265,000

26. 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?



P = A + B + C + D
P = 96 + 106 + 119 + 72
P = 202 + 119 + 72
P = 328 + 72
P = 393

96
+106
202
202
+119
321
321
+ 72
393

[ ] ft

Answer: 393

27. Evelyn Abrams is reading a 775-page book. If she has just finished reading page 279, how many more pages must she read to finish the book?

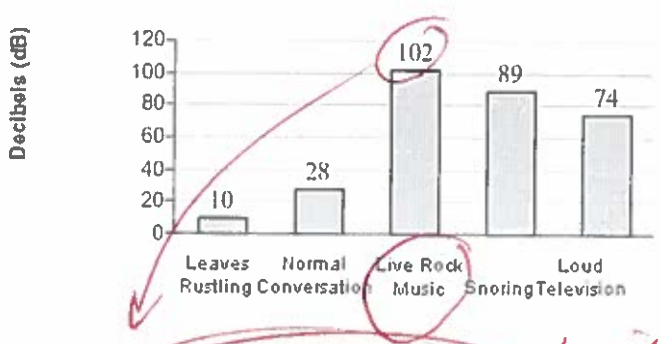
775
−279
496

Check
496
+279
775
Good

[ ] pages

Answer: 496

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

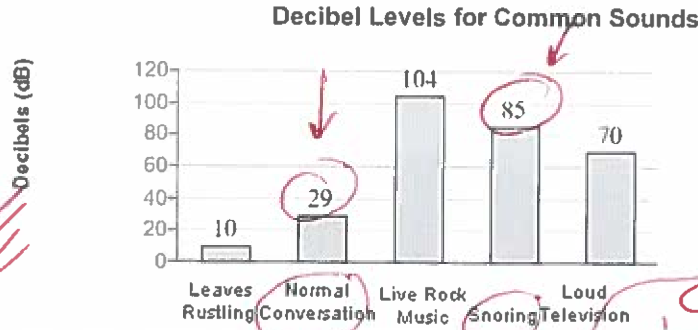


102 dB
Live Rock music

[ ] dB

Answer: 102

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



[ ] dB

Answer: 56

30. 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

31. 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	185
California	27
Florida	61
Georgia	141
Illinois	78
New York	50
Michigan	70
Minnesota	60
Ohio	84
Texas	38

Answer: 410

32. A particular state has 2046 miles of urban highways and 3829 miles of rural highways. Find the total highway mileage in the state.

The total highway mileage in the state is [ ] miles.

Answer: 5875

33. Round 2,859 to the nearest hundred.

The number 2,859 rounded to the nearest hundred is [ ].

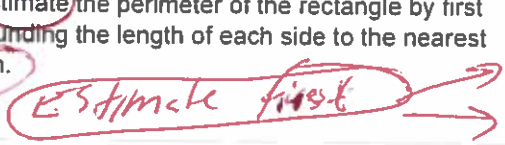
Answer: 2,900

34. Round 41,337 to the nearest thousand.

41,337 rounded to the nearest thousand is [ ].

Answer: 41,000

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



The estimated perimeter is [ ] meters.

Answer: 160

36. Multiply.

$$\begin{array}{r} 316 \\ \times \quad 4 \\ \hline \end{array}$$

Answer: 1264

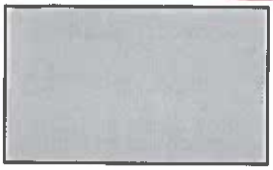
37. Multiply.

$$\begin{array}{r} 99 \\ \times \quad 66 \\ \hline \end{array}$$

The product is [ ].

Answer: 6534

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



L = 7

W = 5

The area of the rectangle is ____ (1) ____

The perimeter of the rectangle is ____ (2) ____

(1) ○ cubic meters. ○ meters. ○ square meters.

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

$A = Lw$

$A = (7)(5)$

$A = 35$

$P = 2L + 2W$

$P = 2(7) + 2(5)$

$P = 14 + 10$

$P = 24$

14 + 10 = 24

Answers 35

(1) square meters.

24

(2) meters.

39. One triple fudge brownie contains 139 calories. How many calories are in 3 triple fudge brownies?

____ calories

$\frac{1}{139} = \frac{3}{N}$

$1(N) = 139(3)$ Cross multiply

$N = 417$

139 × 3 = 417

Answer: 417

40. The textbook for a course in biology costs $95. There are 28 students in the class. Find the total cost of the biology books for the class.

The total cost is $____.

$\frac{1}{95} = \frac{28}{N}$

$1(N) = 95(28)$ Cross multiply

$N = 2660$

95 × 28 = 1760 + 190 = 2660

Answer: 2,660

41. A plot of land measures 70 feet by 140 feet. Find its area.

L = 140 W = 70

The area of the rectangle is ____ (1) ____

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

$A = Lw$

$A = (140)(70)$

$A = 9800$

140 × 70 = 000 + 9800 = 9800

Answers 9,800

(1) square feet.

42. One ounce of nuts contains 196 calories. How many calories are in 13 ounces of nuts?

_____ calories

Answer: 2548

$\frac{1}{196} = \frac{13}{N}$

$1(N) = 196(13)$ Cross Multiply

$N = 2548$

196 × 13 = 588 + 1960 = 2548

43. 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 $15 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	2	$12	$24
M	3		
L	4		
XL	10		
XXL	2		

Total Cost ____

T-Shirt Size	Number of Shirts Ordered	Cost per Shirt	Cost per Size Ordered
S	2	$12	$24
M	3	$ 12	$ 36
L	4	$ 12	$ 48
XL	10	$ 15	$ 150
XXL	2	$ 15	$ 30

Total Cost$ _____

Total

24
36
48
150
+ 30
288

Total Costs

12 × 2 = 24
12 × 3 = 36
12 × 4 = 48
12 × 10 = 00 + 120 = 120
15 × 2 = 30

Answers 12
36
12
48
15
150
15
30
288

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

The company produces _____ tea bags in one day of operation.

Answer: 3,420,000

(3000)(19 hrs) = Change to minutes

(3000)(19 * 60) =

(3000)(1140) =

19 × 60 = 00 + 1140 = 1140

1140 × 3000 = 0000 + 0000 + 0000 + 3420 = 3420000

3,420,000 =

45. Divide the following and then check by multiplying.

$5\overline{)385}$

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 77.

77
5 | 385
−(35)
35
−(35)
0 rem

46. Divide the following and then check by multiplying.

$7\overline{)1566}$

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 223 R 5.

223 rem 5 OR 223 5/7

223
7 | 1566
−(14)
16
−(14)
26
−(21)
5 rem

47. For their wedding, Ben and Jen paid $11 for each guest's dinner. The total bill was $2090. How many guests did they have at their wedding?

_____ guests

Answer: 190

190
11 | 2090
−(11)
99
−(99)
00

48. A truck hauls wheat to a storage granary. It carries a total of 5,616 bushels of wheat in 12 trips. How much does the truck haul each trip if each trip it hauls the same amount?

The truck hauls _____ bushels each trip.

Answer: 468

468
12 | 5616
−(48)
81
−(72)
96
−(96)
0 rem

49. Suppose the elevation of a peak on a certain planet is 31,680 feet. A mile is 5280 feet. How many miles tall is the peak?

The peak is _____ miles tall.

Answer: 6

5280
× 6
31680

6
5280 | 31680
−(31680)
0 rem

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

20, 21, 17, 27, 16, 19

The average value is ____.

Answer: 20

51. Evaluate.

4^4

4^4 = ____

Answer: 256

52. Simplify.

40 + 7 • 6

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

A. 40 + 7 • 6 = ____

B. The expression is undefined.

Answer: A. 40 + 7 • 6 = 82

53. Simplify.

8 ÷ 2 • 4 + 6

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

A. 8 ÷ 2 • 4 + 6 = ____

B. The expression is undefined.

Answer: A. 8 ÷ 2 • 4 + 6 = 22

54. Simplify.

14 ÷ 2 − 1

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

A. 14 ÷ 2 − 1 = ____

B. The expression is undefined.

Answer: A. 14 ÷ 2 − 1 = 6

55. Simplify.

$49 + \frac{64}{8}$

PEMDAS

left to right

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

○ **A.** $49 + \frac{64}{8} =$ _____

○ **B.** The expression is undefined.

$49 + \frac{64}{8} =$

$49 + 8 =$

$57 =$ ✓

Answer: A. $49 + \frac{64}{8} =$ **57**

56. Simplify.

$3 \cdot 4 + 5 \cdot 5$

Left to right

PEMDAS

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

○ **A.** $3 \cdot 4 + 5 \cdot 5 =$ _____

○ **B.** The expression is undefined.

$3 \cdot 4 + 5 \cdot 5 =$

$12 + 5 \cdot 5 =$

$12 + 25 =$

$37 =$ ✓

Answer: A. $3 \cdot 4 + 5 \cdot 5 =$ **37**

57. Simplify.

$\frac{24 + 8}{2^3 - 2^2}$

PEMDAS

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

PEMDAS

○ **A.** $\frac{24 + 8}{2^3 - 2^2} =$ _____

○ **B.** The expression is undefined.

$\frac{24 + 8}{2^3 - 2^2} =$

$\frac{24 + 8}{2 \cdot 2 \cdot 2 - 2 \cdot 2} =$

$\frac{24 + 8}{8 - 4} =$

$\frac{32}{4} =$

$8 =$ ✓

Answer: A. $\frac{24 + 8}{2^3 - 2^2} =$ **8**

PEMDAS

58. Simplify.

$(3 + 4) \cdot (10 - 6)$

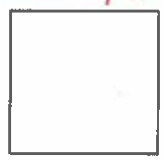
Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. $(3 + 4) \cdot (10 - 6) =$ _____
- B. The expression is undefined.

Answer: A. $(3 + 4) \cdot (10 - 6) =$ **28**

$(3+4)\cdot(10-6) =$
$(7)\cdot(4) =$
$7 \cdot 4 =$
$28 =$

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



L = 13
W = 13

The area of the square is _____ (1) _____

The perimeter of the square is _____ (2) _____

(1) ○ meters. ○ square meters.

(2) ○ meters. ○ square meters.

Answers 169

(1) square meters.

52

(2) meters.

$P = 2L + 2W$
$P = 2(13) + 2(13)$
$P = 26 + 26$
$P = 52$

PEMDAS

or

$P = 4s$
$P = 4(13)$
$P = 52$

$13 \times 4 = 52$

$13 \times 2 = 26$

$13 \times 2 = 26$

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

$2xz - 3x$

$2xz - 3x =$ _____

Answer: 15

$2 * z - 3 * =$ PEMDAS
$2(5)(3) - 3(5) =$ Subst
$2(15) - 3(5) =$
$30 - 15 =$
$15 =$

61. Evaluate the expression for $x = 2$ and $y = 6$.

$\frac{3y - 8}{x}$

$\frac{3y - 8}{x} =$ _____

Answer: 5

PEMDAS

$\frac{3y - 8}{x} =$
$\frac{3(6) - 8}{(2)} =$ Subst
$\frac{18 - 8}{2} =$
$\frac{10}{2} =$
$5 =$

62. Evaluate the expression for x = 22, y = 2, and z = 4.

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

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

Answer: 7

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

$\frac{(22)+3(2)}{(4)} =$ subst

$\frac{22+6}{4} =$

$\frac{28}{4} =$ 7

63. Evaluate the algebraic expression for the given value.

$x^2 - 2x + 8$, for x = 5

When x = 5, $x^2 - 2x + 8 =$ ____.
(Simplify your answer.)

Answer: 23

$x^2 - 2x + 8 =$ PEMDAS

$(5)^2 - 2(5) + 8 =$ subst

$(5)(5) - 2(5) + 8 =$

$25 - 10 + 8 =$

$15 + 8 =$

$23 =$

25 15
−10 +8
15 23

64. Evaluate the following expression for x = 1 and y = 4.

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

The answer is ____.

Answer: 13

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

$\frac{2(1)+6(4)}{2(1)} =$ subst

$\frac{2+24}{2} =$

$\frac{26}{2} =$ PEMDAS

$13 =$

13
2 | 26
6
6
0

65. Simplify.

$8 + 4 \cdot 7 - 10$

$8 + 4 \cdot 7 - 10 =$ ____

Answer: 26

$8 + 4 \cdot 7 - 10 =$ PEMDAS

$8 + 28 - 10 =$

$36 - 10 =$

$26 =$

66. Solve. Check your solution.

$x + 9 = 24$

The solution is x = ____.

Answer: 15

$x + 9 = 24$

$x + 9 - 9 = 24 - 9$

$x = 15$

Check

$x + 9 = 24$

$(15) + 9 = 24$

$15 + 9 = 24$

$24 = 24$

Good

24
− 9
15

1
15
+ 9
24

67. Solve.

$3x = 36$

The solution is x = ____.

Answer: 12

68. Solve the following equation.

$2x - 10 = 0$

x = ____

Answer: 5

69. Solve the equation.

$5n + 35 = 55$

n = ____

Answer: 4

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

A fraction which represents the figure is ____.

Answer: $\frac{4}{7}$

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

A. The improper fraction which represents the shaded area of the figure group is ____.

B. The mixed number which represents the shaded area of the figure group is ____.

Answers $\frac{9}{4}$

$2\frac{1}{4}$

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

A. The improper fraction that represents the shaded area of the figure group is ____.

B. The mixed number that represents the shaded area of the figure group is ____.

Answers $\frac{11}{4}$

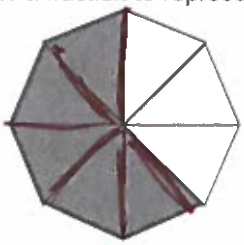
$2\frac{3}{4}$

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

The fraction which represents the shaded region is ____.

Answer: $\frac{11}{12}$

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



The fraction representing the shaded part is ____.

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

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

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

Answer: $\frac{4}{9}$

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

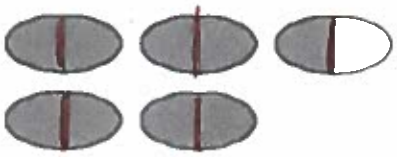
(a) Write the shaded area as an improper fraction.

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

Answers $\frac{5}{4}$

$1\frac{1}{4}$

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



a. Write the shaded area as an improper fraction.

b. Write the shaded area as a mixed number.

Answers $\frac{9}{2}$

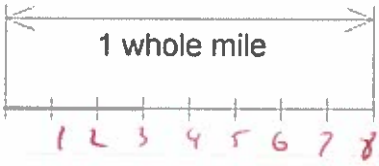
$4\frac{1}{2}$

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

The fraction represented by the shaded parts is .

Answer: $\frac{3}{8}$

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



The fraction that represents the shaded part is .

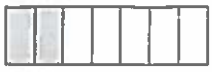
Answer: $\frac{3}{8}$

80.

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

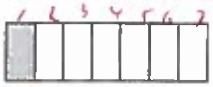
Which object represents the fraction $\frac{1}{7}$?

Choose the correct answer below.

A. 

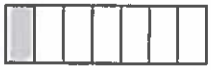
B. 

C. 

D. 

E. None of the above.

$\frac{1}{7}$

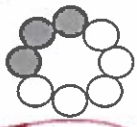
Answer: D. 

81.

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

Which object represents the fraction $\frac{4}{8}$?

Choose the correct answer below.

A. 

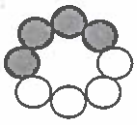
B. 

C. 

D. 

E. None of the above.

$\frac{4}{8}$ = $\frac{\text{shaded}}{\text{all}}$

Answer: C. 

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

2 | 4
2 | 2
1

2 | 8
2 | 4
2 | 2
1

$4 = 2 \cdot 2$

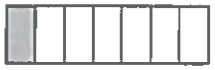
$8 = 2 \cdot 2 \cdot 2$

$\frac{4}{8}$ OR $\frac{2 \cdot 2}{2 \cdot 2 \cdot 2} = \frac{1}{2}$

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

Which figure represents the fraction $\frac{7}{7}$?

Choose the correct answer below.

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

Should all

$\frac{7}{7}$

Answer: D. 

83. In an American Sign Language (A.S.L) class of 15 students, 8 are hearing impaired. What fraction of the students are hearing impaired?

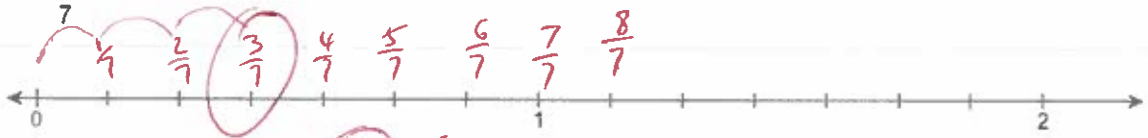
The fraction of the students that are hearing impaired is ____.

Hearing impaired / Class of students = $\frac{8}{15}$

Answer: $\frac{8}{15}$

84. Graph the fraction on a number line.

$\frac{3}{7}$



Answer:

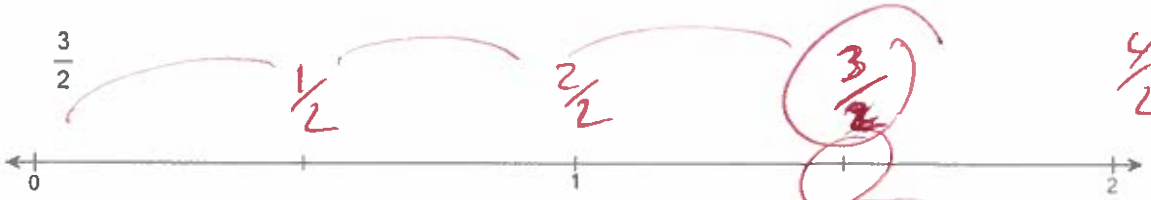
85. Graph the fraction on a number line.

$\frac{2}{3}$

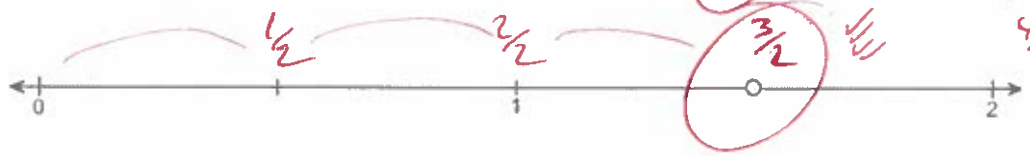
Answer:

86. Graph the fraction on a number line.

$\frac{3}{2}$



Answer:



87. Find the prime factorization of the following number.

52

The prime factorization of 52 is ☐.

Answer: $2^2 \cdot 13$

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

$52 = 2 \cdot 2 \cdot 13$ OR $52 = 2^2 \cdot 13$

2 | 52
2 | 26
13 | 13
1

88. Find the prime factorization of the following number.

16

The prime factorization of 16 is ☐.

Answer: 2^4

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

$16 = 2 \cdot 2 \cdot 2 \cdot 2$ OR $16 = 2^4$

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

2 x 2 = 4; 4 x 2 = 8; 8 / 2 = 16

89. Find the prime factorization of the following number.

78

The prime factorization of 78 is ☐.

Answer: $3 \cdot 2 \cdot 13$

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

$78 = 2 \cdot 3 \cdot 13$ OR $78 = 13 \cdot 3 \cdot 2$

2 | 78
3 | 39
13 | 13
1

90. Perform the indicated operation.

$6 \div \frac{7}{11}$

$6 \div \frac{7}{11} =$ ☐ (Simplify your answer.)

Answer: $\frac{66}{7}$

$6 \div \frac{7}{11} =$

$\frac{6}{1} \div \frac{7}{11} =$

$\frac{6}{1} \cdot \frac{11}{7} =$ rewrite

$\frac{66}{7} =$

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

2 | 6
3 | 3
1

$6 = 2 \cdot 3$

91. Perform the indicated operation.

$\frac{1}{3} \div \frac{7}{6}$

$\frac{1}{3} \div \frac{7}{6} =$ _____ (Type an integer or a simplified fraction.)

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

92. Find $\frac{1}{4}$ of 140.

$\frac{1}{4}$ of 140 is _____. (Simplify your answer. Type a whole number, fraction, or mixed number.)

Answer: 35

93. Find $\frac{9}{10}$ of 50. Write the answer in simplest form.

$\frac{9}{10}$ of 50 is _____. (Simplify your answer.)

Answer: 45

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

3.799 3.8

3.799 _____ 3.8

Answer: <

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

0.755 0.75500

0.755 _____ 0.75500

Answer: =

96. Round the decimal to the nearest tenth.

0.94

0.94 rounded to the nearest tenth is ____.

Answer: 0.9

0.94 ← since 4 < 5 do not round up

0.9

97. Round 0.7131 to the nearest thousandth.

0.7131 ≈ ____

Answer: 0.713

0.7131 since 1 < 5 do not round up

0.713

98. Round the monetary amount to the nearest dollar.

$90.72

$90.72 rounded to the nearest dollar is $____.

Answer: 91

$90.72 since 7 ≥ 5 round up

$91

99. Write as a decimal.

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

$3\frac{9}{100}$ = ____ 3 + 0.09 =

Answer: 3.09

.09
100 | 9.00
−900
0 rem

3.00
+ 0.09
3.09

3.09

100. Add the following.

8.2 + 5.33

8.2 + 5.33 = ____ (Type an integer or a decimal.)

Answer: 13.53

8.20
+ 5.33
13.53

101. Subtract and check the following.

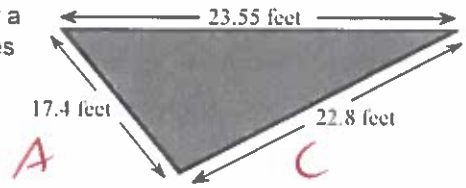
15 − 3.3

15 − 3.3 = ____ (Type an integer or a decimal.)

Answer: 11.7

14 1 0
15.0
− 3.3
11.7

102. A landscape architect is planning a border for a flower garden shaped like a triangle. The sides of the garden measure 17.4 feet, 23.55 feet, and 22.8 feet. Find the amount of border material needed.



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

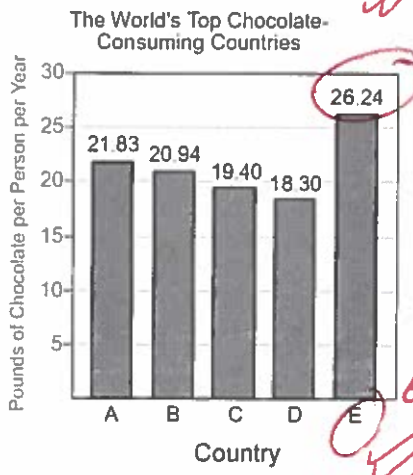
Answer: 63.75

103. 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 D
- Country E
- Country C
- Country A
- Country B



Answer: Country E

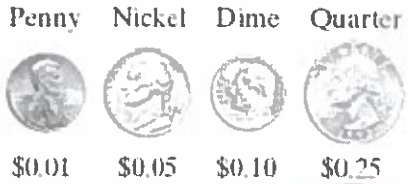
104. Use the values of the coins given below. Write the value of the group of coins shown to the right. To do so, it is usually easiest to start with the coin(s) of greatest value and end with the coin(s) of least value.

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

The total value of the group is $[ ].

Answer: 1.30

105. 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.

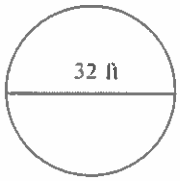


Choose the correct answer below. Select all that apply.

- [x] A. 1 dime and 1 nickel
- [x] B. 1 dime and 5 pennies
- [ ] C. 3 nickels and 6 pennies
- [x] D. 3 nickels
- [x] E. 2 nickels and 5 pennies
- [ ] F. 1 dime, 2 nickels and 5 pennies

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

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



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

The exact circumference is [ ] ft.

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

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

Answers 32π

100.48

107. A 1-ounce serving of cream cheese contains 8.2 grams of saturated fat. How much saturated fat is in 6 ounces of cream cheese?

[ ] g

Answer: 49.2

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

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

Answer: 9.1

109. A meter is a unit of length approximately equal to 39.37 inches. If someone is 1.85 meters tall, what is his or her approximate height in inches?

Using the given conversion, someone who is 1.85 meters tall has a height of ____ inches. (Type an integer or a decimal.)

Answer: 72.8345

$\frac{1}{39.37} = \frac{1.85}{N}$

$1(N) = 39.37(1.85)$ cross mult

$N = 72.8345$

39.37 × 1.85 = 72.8345

110. 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

1303.50 or 13.035 × 100 = 1303.500

111. Perform the indicated operation.

4.6 + 0.03

4.6 + 0.03 = ____ (Type an integer or a decimal.)

Answer: 4.63

4.60 + 0.03 = 4.63

112. Find the decimal equivalent of the following fraction.

$\frac{14}{25}$

$\frac{14}{25}$ = ____

Answer: 0.56

0.56 or 25 | 14.00 → 150 → 0 rem

113. Write as an equivalent decimal.

$\frac{3}{4}$

$\frac{3}{4}$ = ____

Answer: 0.75

0.75 or 4 | 3.00 → 20 → 0 rem

114. Write $3\frac{17}{20}$ as a decimal.

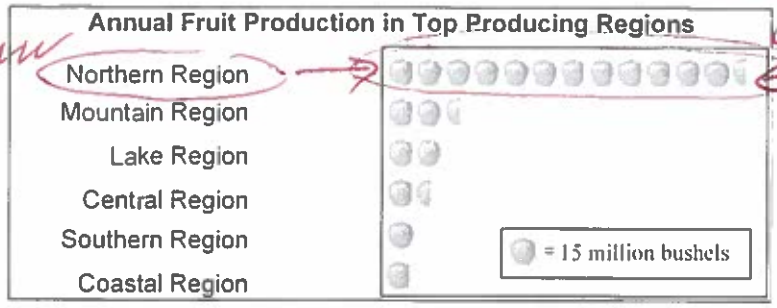
$3\frac{17}{20}$ = ____

Answer: 3.85

$3\frac{17}{20} = 3 + \frac{17}{20} = 3 + 0.85 = 3.85$

20 | 17.00 → 100 → 0 rem

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



Which region produced the greatest quantity of fruit?

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

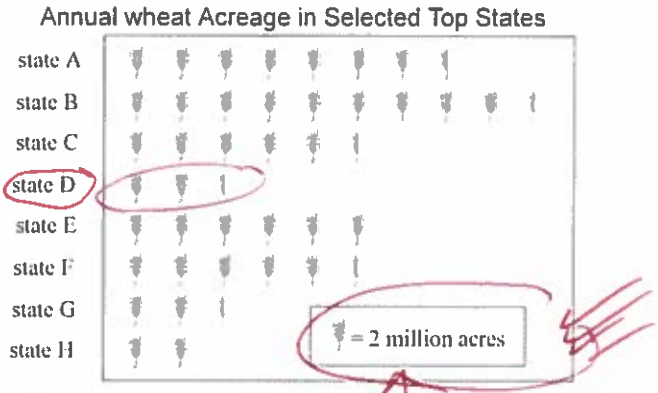
Answer: F. The northern region

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

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

2.5 × 2 = 5.0 million acres

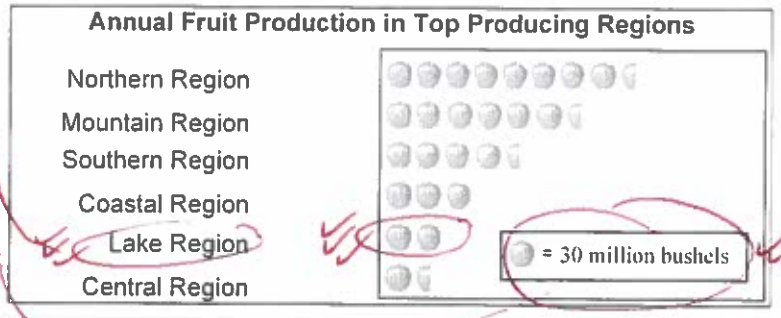
2 1/2 or 2.5



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

Answer: 5

117. The pictograph shows last year's fruit production by the top fruit-producing regions. Which region produces about 60 million bushels of fruit?



30 x 2 = 60 million bushels

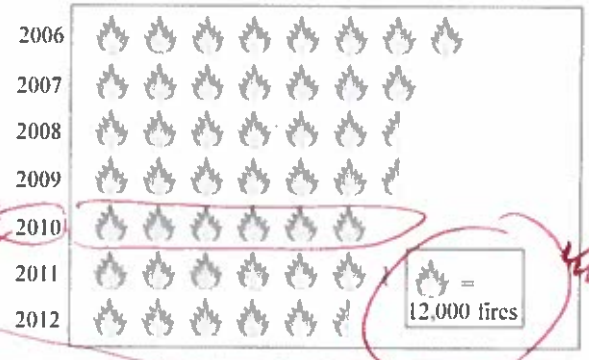
Choose the correct answer below.

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

Answer: D. The lake region

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

Approximate the number of wildfires in 2010.



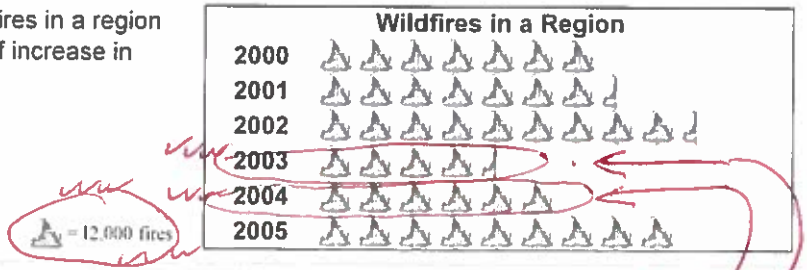
12000 x 6 = 72,000 wildfires

The number of wildfires in the year 2010 is approximately [ ].

(Type an integer or a decimal.)

Answer: 72,000

119. The pictograph shows the annual number of wildfires in a region between 2000 and 2005. What was the amount of increase in wildfires from 2003 to 2004?



The number of wildfires in the region increased by about [ ] from 2003 to 2004.

Answer: 18,000

12000 x 1.5 = 60000 + 12000 = 180000

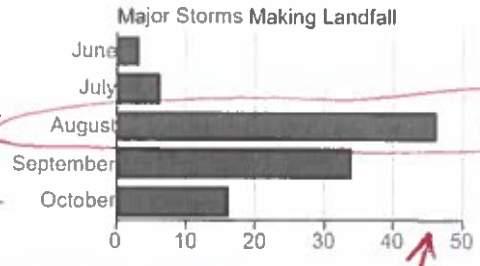
2004 → 6.0

2003 → −4.5

1.5

18,000

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

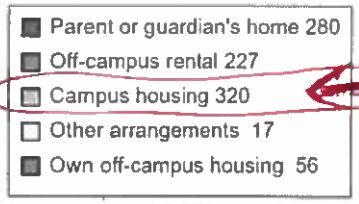


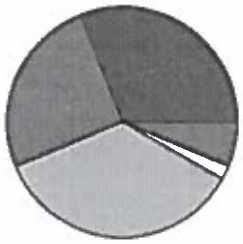
In which month did the most major storms make landfall in the region?

- ○ October
- ○ September
- ○ June
- ⊗ August
- ○ July
- ○ Cannot be determined

Answer: August

121. The circle graph is a result of surveying 900 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. Other arrangements
- ○ B. Own off-campus housing
- ○ C. Parent or guardian's home
- ○ D. Off-campus rental
- ⊗ E. Campus housing

Answer: E. Campus housing

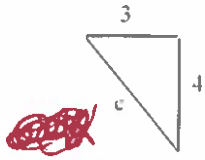
122. Find the square root.

$\sqrt{36}$

$\sqrt{36}$ = [ ]

Answer: 6

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



a=3 b=4 c=N

$a^2+b^2=c^2$
$(3)^2+(4)^2=c^2$
$9+16=c^2$
$25=c^2$
$\sqrt{25}=\sqrt{c^2}$
$5=c$

The length of the third side is [ ].

Answer: 5

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

leg = 24, leg = 7

a=24, b=7, c

$a^2+b^2=c^2$
$(24)^2+(7)^2=c^2$
$576+49=c^2$
$625=c^2$
$\sqrt{625}=\sqrt{c^2}$
$25=c$

What is the length of the side not given?

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

Answer: 25

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

leg = 13, hypotenuse = 85

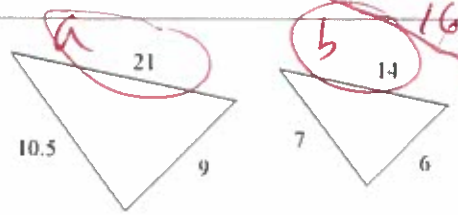
a=13, b=N, c=85

$a^2+b^2=c^2$
$(13)^2+b^2=(85)^2$
$169+b^2=7225$
$169-169+b^2=7225-169$
$b^2=7056$
$\sqrt{b^2}=\sqrt{7056}$
$b=84$

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

Answer: 84

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

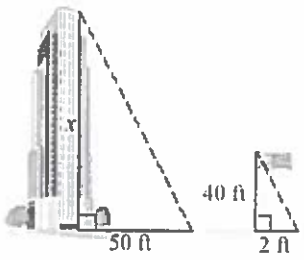


$\frac{a}{b}=$
$\frac{21}{14}=$
$\frac{3(7)}{2(7)}=$
$\frac{3}{2}$

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

Answer: $\frac{3}{2}$

127. 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.



$\frac{x}{50} = \frac{40}{2}$

$2(x) = 50(40)$ cross multiply

$2x = 2000$

$\frac{2x}{2} = \frac{2000}{2}$

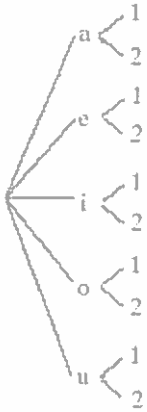
$x = 1000$

The height of the building is [ ] feet.

Answer: 1000

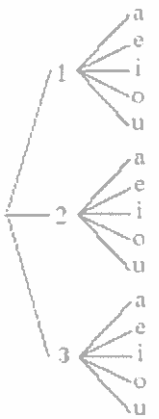
128. Draw a tree diagram for choosing a vowel, (a, e, i, o, u) and then a number (1, 2, 3 or 4). Use the diagram to find the number of possible outcomes.

○ A.



○ B.

○ C.



○ D.

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

Answers

B.

20

(Vowels)(Numbers)

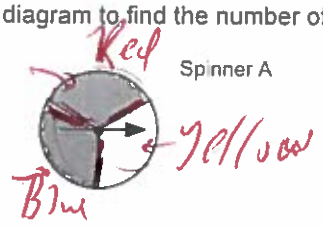
$(5)(4) =$

$20 =$

possible outcomes

129.

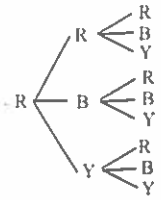
Draw a tree diagram for spinning Spinner A 3 times. Use the diagram to find the number of possible outcomes.



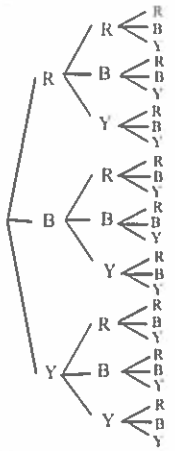
Based on the tree, what is the number of possible outcomes?

Choose the correct tree diagram below.

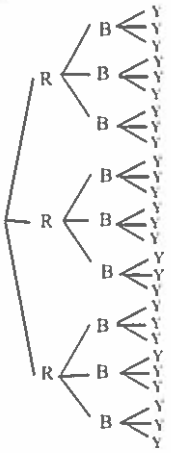
A.



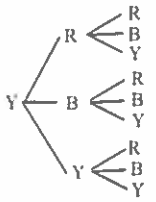
B.



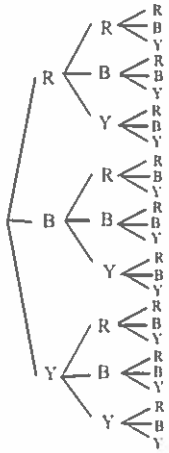
C.



D.

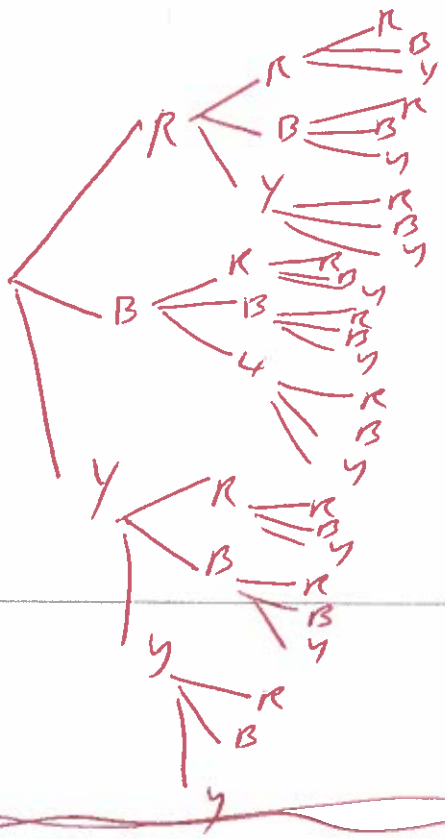


Answers



B.

27



(3)(3)(3) =

9(3) =

27 possible outcomes

130. A marble is selected at random from a jar containing 6 red marbles, 4 yellow marbles, and 5 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: $\frac{2}{5}$

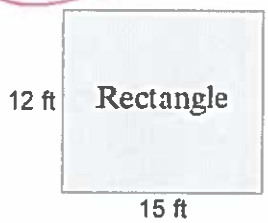
red / all red

red + yellow + green

$\frac{6}{6+4+5} = \frac{6}{15}$

$\frac{6}{15}$ or $\frac{3(2)}{3(5)} = \frac{2}{5}$ simplified

131. Find the perimeter of the following figure.



$L = 15$ $W = 12$

$P = 2L + 2W$

$P = 2(15) + 2(12)$

$P = 30 + 24$

$P = 54$

30 + 24 = 54

Perimeter = ____ (1) ____

(1) ○ ft
○ sq. ft

Answers 54

(1) ft

1 1

132. Find the perimeter of the following figure.

$L = 47$, $W = 37$

$P = 2L + 2W$

$P = 2(47) + 2(37)$

$P = 168$

47 × 2 = 94

37 × 2 = 74

94 + 74 = 168

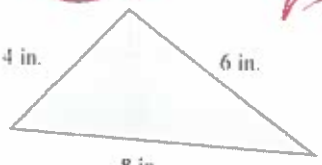
Perimeter = ____ (1) ____

(1) ○ sq. cm
○ cm

Answers 168

(1) cm

133. Find the perimeter of the following figure.



$P = A + B + C$

$P = 4 + 6 + 8$

$P = 10 + 8$

$P = 18$

4 + 6 = 10 ; 10 + 8 = 18

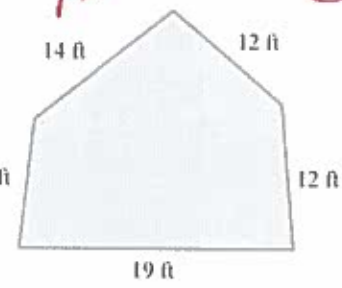
The perimeter is [ ] (1) [ ]

(1) ○ sq. in.
○ in.

Answers 18

(1) in.

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



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

$P = 11 + 14 + 12 + 12 + 19$

$P = 68$

11 + 14 + 12 + 12 + 19 = 68

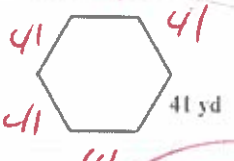
Perimeter = [ ] (1) [ ]

(1) ○ sq. ft.
○ ft.

Answers 68

(1) ft.

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



$s = 41$

$P = 6s$

$P = 6(41)$

$P = 246$

41 × 6 = 246

Perimeter = [ ] (1) [ ]

(1) ○ sq yd
○ yd

Answers 246

(1) yd

136. A metal strip is being installed around a workbench that is 11 feet long and 4 feet wide. If the stripping costs $5 per foot, find the total cost of the stripping.

Total cost = $ ____

Answer: 150

$L = 11,\ W = 4$

$P = 2L + 2W$

$P = 2(11) + 2(4)$

$P = 22 + 8$

$P = 30$

Total cost → 30 × 5 → $150 answer

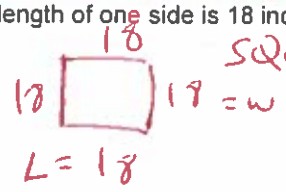
137. Find the perimeter of the top of a square compact case if the length of one side is 18 inches.

The perimeter is ____ (1) ____

(1) ○ inches.
○ square inches.
○ cubic inches.

Answers 72

(1) inches.



square $L = 18$, $W = 18$

$P = 4L$

$P = 4(18)$

$P = 72$

OR

$P = 2L + 2W$

$P = 2(18) + 2(18)$

$P = 36 + 36$

$P = 72$

138. A rectangular room measures 13 feet by 12 feet. Find the cost of installing a strip of wallpaper around the room if the wallpaper costs $0.90 per foot.

Total cost = $ ____

Answer: 45.00

$P = 2L + 2W$

$P = 2(13) + 2(12)$

$P = 26 + 24$

$P = 50$

$L = 13,\ W = 12$

26 + 24 = 50

50 × .90 = 45.00 cost answer

139. A computer has shape of a rectangular solid. Find the volume of the computer, with dimensions of 3 inches by 3 inches by 3.1 inches.

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

(1) ○ in.
○ sq in.
○ cu in.

Answers 27.9

(1) cu in.

$L = 3,\ W = 3,\ H = 3.1$

$V = LWH$

$V = (3)(3)(3.1)$

$V = 9(3.1)$

$V = 27.9$

3.1 × 9 = 27.9

140. Convert the measurement indicated.

132 in to feet

132 in = ____ ft

Answer: 11

1 foot = 12 inches

$12 \overline{)132}$ → 11

$-(12)$

12

$-(12)$

0 rem

141. Convert the measurement as indicated.

13 yd to feet

13 yd = ____ ft

Answer: 39

1 yd = 3 feet

13 yd =

13(3 feet) =

13
× 3
39

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

12 __ 17

12 (1) ____ 17

(1) ○ <
○ >
○ =

Answer: (1) <

12 < 17

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

8 4

8 ____ 4

Answer: >

8 > 4

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

(6 + a) + 6

(6 + a) + 6 = ____

Answer: a + 12

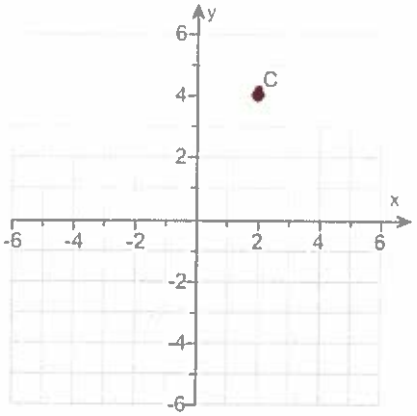
(6 + a) + 6 =

6 + a + 6 =

a + 6 + 6 =

a + 12 =

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



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

(2, 4)
2 right, up 4

Answer: (2,4)

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

$2x + 3y = 13$; (5,1), (2,0), (0,1)

Is (5,1) a solution to the given linear equation?

- Yes
- No

Is (2,0) a solution to the given linear equation?

- No
- Yes

Is (0,1) a solution to the given linear equation?

- No
- Yes

Answers Yes
No
No

(5,1)
x y
$2x+3y=13$
$2(5)+3(1)=13$
$10+3=13$
Good $13=13$ YES

(2,0)
x y
$2x+3y=13$
$2(2)+3(0)=13$
$4+0=13$
BAD $4 \neq 13$ NO

(0,1)
x y
$2x+3y=13$
$2(0)+3(1)=13$
$0+3=13$
BAD $3 \neq 13$ NO

147.

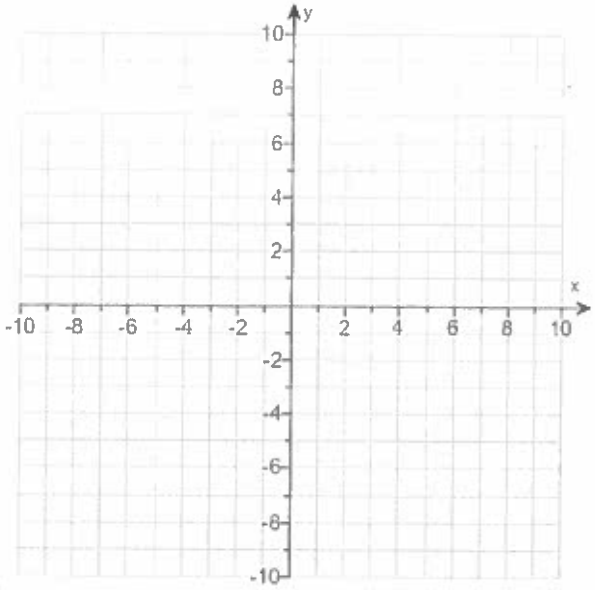
For the equation, find three ordered pair solutions by completing the table. Then use any two of the ordered pairs to graph the equation.

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

Complete the table below.

x	y
0	
−2	
4	

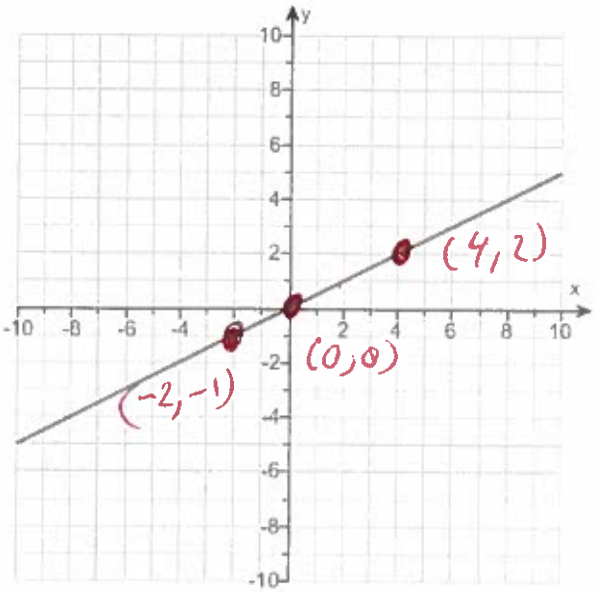
Use the graphing tool to graph the equation.



Answers 0

−1

2



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

$y = \frac{1}{2}(-2)$

$y = \frac{-2}{2}$

$y = -1$

x	y
−2	−1
0	0
4	2

$y = \frac{1}{2}(0)$

$y = \frac{0}{2}$

$y = 0$

$y = \frac{1}{2}(4)$

$y = \frac{4}{2}$

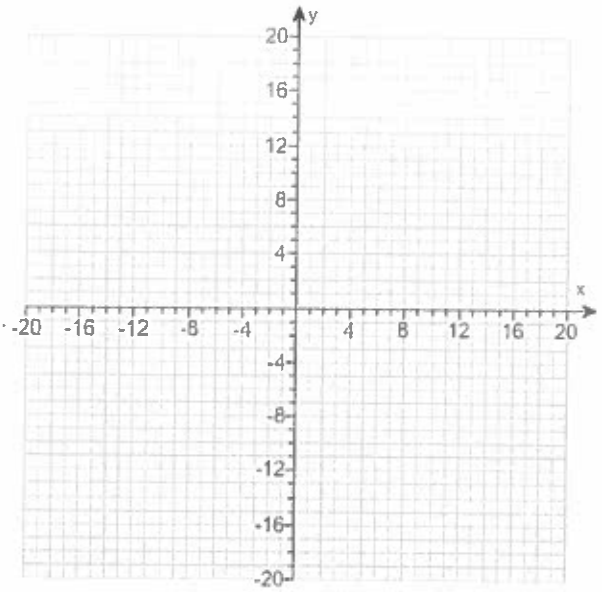
$y = 2$

148.

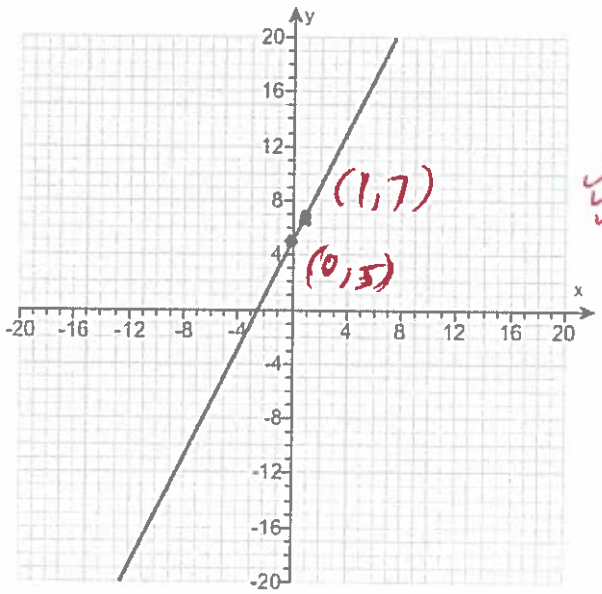
Graph the equation.

$y = 2x + 5$

Use the graphing tool to graph the line.



Answer:



$y = 2(0) + 5$

$y = 0 + 5$

$y = 5$

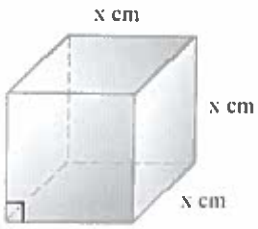
x	y
0	5
1	7

$y = 2(1) + 5$

$y = 2 + 5$

$y = 7$

149. 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 9 centimeters.



$V = LWH$

$V = (9)(9)(9)$

$V = 81(9)$

$V = 729$

$L = 9$

$W = 9$

$H = 9$

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

OR

$V = x^3$

$V = (9)^3$

$V = (9)(9)(9)$

$V = 81(9) \rightarrow V = 729$

$9 \times 9 = 81$

$81 \times 9 = 729$

Answer: 729