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

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

3. Write the whole number in expanded form.

9570

9570 = \text{ } (Type your answer using plus signs.)

Answer: 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 | 235 | 342 |
Moderate walking | 100 | 120 |
Moderate cycling | 124 | 149 |
Aerobic dance | 182 | 218 |
Racquetball | 194 | 233 |
Tennis | 143 | 172 |

Answer: 285 calories
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?

<table>
<thead>
<tr>
<th>Activity</th>
<th>110 lb</th>
<th>150 lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate jogging</td>
<td>311</td>
<td>425</td>
</tr>
<tr>
<td>Moderate walking</td>
<td>110</td>
<td>150</td>
</tr>
<tr>
<td>Moderate cycling</td>
<td>134</td>
<td>183</td>
</tr>
<tr>
<td>Aerobic dance</td>
<td>193</td>
<td>263</td>
</tr>
<tr>
<td>Racquetball</td>
<td>218</td>
<td>297</td>
</tr>
<tr>
<td>Tennis</td>
<td>163</td>
<td>222</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>River</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chang Jiang-Yangtze (China)</td>
<td>3964</td>
</tr>
<tr>
<td>Amazon (Brazil)</td>
<td>4000</td>
</tr>
<tr>
<td>Tenisei-Angara (Russia)</td>
<td>3442</td>
</tr>
<tr>
<td>Mississippi-Missouri (U.S.)</td>
<td>3740</td>
</tr>
<tr>
<td>Nile (Egypt)</td>
<td>4145</td>
</tr>
</tbody>
</table>

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.

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

(1) ☐ Labrador retriever
☐ Boxer

Answer: (1) Labrador retriever

8. Add.

14 + 83

The sum is ______.

Answer: 97


\[
\begin{align*}
81 \\
+ 316
\end{align*}
\]

\[
\begin{align*}
81 \\
+ 316
\end{align*}
\]

Answer: 397
10. Add.

\[
\begin{array}{c}
14 \\
22 \\
+ 31 \\
\hline
67
\end{array}
\]

The sum is [ ] .

Answer: 67

11. Subtract. Check by adding.

\[
\begin{array}{c}
549 \\
- 449 \\
\hline
100
\end{array}
\]

The difference is [ ] .

Answer: 100

12. Subtract.

\[
\begin{array}{c}
66 \\
- 38 \\
\hline
28
\end{array}
\]

The difference is [ ] .

Answer: 28


\[
\begin{array}{c}
733 \\
- 357 \\
\hline
376
\end{array}
\]

The difference is [ ] .

Answer: 376


\[
\begin{array}{c}
900 \\
- 316 \\
\hline
584
\end{array}
\]

The difference is [ ] .

Answer: 584
15. Subtract. Check by adding.

\[ \begin{align*}
442 \\
-36
\end{align*} \]

The difference is \[ \underline{406} \].

Answer: 406


\[ 85 - 77 \]

The answer is \[ \underline{8} \].

Answer: 8

17. Find the perimeter of the figure.

\[ \begin{align*}
A & \quad 6 \text{ feet} \\
B & \quad 9 \text{ feet} \\
C & \quad 10 \text{ feet}
\end{align*} \]

The perimeter is \[ \underline{25} \] feet.

Answer: 25

18. Find the perimeter of the figure.

\[ \begin{align*}
\text{Rectangle} \\
1 \text{ foot} \\
2 \text{ feet}
\end{align*} \]

\[ \begin{align*}
L & = 2 \\
W & = 1
\end{align*} \]

The perimeter is \[ \underline{6} \].

Answer: 6

19. Find the perimeter of the figure.

\[ \begin{align*}
P & = 14 + 9 + 8 + 19 + 11 + 14 \quad \text{D} \\
& = 23 + 8 + 19 + 11 + 14 \\
& = 31 + 19 + 11 + 14 \\
& = 50 + 11 + 14 \\
& = 61 + 14 \\
& = 75 \quad \text{A}
\end{align*} \]

Answer: 75
20. Find the total of 55, 44, 7, 19, and 245.

The total is 370.

Answer: 370

21. Find the difference of 68 and 39.

The difference is 29.

Answer: 29

22. What is 645 increased by 83?

645 increased by 83 is 728.

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 $76 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.

261,000 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?

\[ \frac{510,000 - 245,000}{245,000} = \frac{265,000}{245,000} \]

Answer: 265,000 sq mi

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 area shown?

- \[ P = A + B + C + D \]
- \[ P = 96 + 106 + 119 + 72 \]
- \[ P = 202 + 119 + 72 \]
- \[ P = 393 \]

Answer: 393 ft

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?

\[ \text{Pages remaining} = 775 - 279 = 496 \]

Answer: 496 pages

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

Answer: 102 dB
29. How much louder is the sound of snoring than normal conversation?

\[ 85 - 29 = 56 \text{ dB} \]

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.

\[ s = 42 \text{ ft} \]
\[ p = 4s = 4(42) = 168 \text{ ft} \]

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?

<table>
<thead>
<tr>
<th>State</th>
<th>Number of Stores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>185</td>
</tr>
<tr>
<td>California</td>
<td>27</td>
</tr>
<tr>
<td>Florida</td>
<td>61</td>
</tr>
<tr>
<td>Georgia</td>
<td>141</td>
</tr>
<tr>
<td>Illinois</td>
<td>78</td>
</tr>
<tr>
<td>New York</td>
<td>50</td>
</tr>
<tr>
<td>Michigan</td>
<td>70</td>
</tr>
<tr>
<td>Minnesota</td>
<td>60</td>
</tr>
<tr>
<td>Ohio</td>
<td>84</td>
</tr>
<tr>
<td>Texas</td>
<td>38</td>
</tr>
</tbody>
</table>

A total of 185 + 141 + 84 = 410 stores are located in the three states with the most stores.

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.

\[ 2046 + 3829 = 5875 \text{ miles} \]

Answer: 5875

33. Round 2,859 to the nearest hundred.

The number 2,859 rounded to the nearest hundred is 2,900.

Answer: 2,900
34. Round 41,337 to the nearest thousand.

41,337 rounded to the nearest thousand is \[ \underline{40,000} \].

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 \[ \underline{160} \] meters.

Answer: 160

36. Multiply.

\[
\begin{array}{c}
316 \\
\times \underline{4}
\end{array}
\]

Answer: 1264

37. Multiply.

\[
\begin{array}{c}
99 \\
\times \underline{66}
\end{array}
\]

The product is \[ \underline{6534} \].

Answer: 6534
38. Find the area and the perimeter of the rectangle shown to the right.

The area of the rectangle is \( \square \) (1) \( \square \)

The perimeter of the rectangle is \( \square \) (2) \( \square \)

(1) \( \bigcirc \) cubic meters. (2) \( \bigcirc \) square meters.

\( \bigcirc \) meters. \( \bigcirc \) square meters.

\( \bigcirc \) cubic meters.

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?

\[ \frac{1}{139} = \frac{3}{N} \]

\[ 1(\text{N}) = 139(3) \text{ Cross multiply,} \]

\[ N = 417 \]

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.

\[ \frac{1}{95} = \frac{28}{N} \]

\[ 1(\text{N}) = 95(28) \text{ Cross multiply,} \]

\[ N = 2660 \]

Answer: 2,660

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

The area of the rectangle is \( \square \) (1) \( \square \)

(1) \( \bigcirc \) cubic feet.

\( \bigcirc \) feet.

\( \bigcirc \) square feet.

Answers 9,800

(1) square feet.
42. One ounce of nuts contains 196 calories. How many calories are in 13 ounces of nuts?

\[
\frac{196}{13} = \frac{196 \times 13}{13} \quad \text{cross multiply}
\]

\[N = 2548\]

Answer: 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.)

<table>
<thead>
<tr>
<th>T-Shirt Size</th>
<th>Number of Shirts Ordered</th>
<th>Cost per Shirt</th>
<th>Cost per Size Ordered</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>2</td>
<td>$12</td>
<td>$24</td>
</tr>
<tr>
<td>M</td>
<td>3</td>
<td>$12</td>
<td>$36</td>
</tr>
<tr>
<td>L</td>
<td>4</td>
<td>$12</td>
<td>$48</td>
</tr>
<tr>
<td>XL</td>
<td>10</td>
<td>$15</td>
<td>$150</td>
</tr>
<tr>
<td>XXL</td>
<td>2</td>
<td>$15</td>
<td>$30</td>
</tr>
</tbody>
</table>

Total Cost = $288

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 \(\frac{3000 \times 19 \times 60}{1140}\) tea bags in one day of operation.

Answer: 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.

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.

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

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

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
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.

\[ 4^4 = \]

Answer: 256

52. Simplify.

\[ 40 + 7 \cdot 6 = \]

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

- A. \[ 40 + 7 \cdot 6 = \]
- B. The expression is undefined.

Answer: A. \[ 40 + 7 \cdot 6 = 82 \]

53. Simplify.

\[ 8 + 2 \cdot 4 + 6 = \]

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

- A. \[ 8 + 2 \cdot 4 + 6 = \]
- B. The expression is undefined.

Answer: A. \[ 8 + 2 \cdot 4 + 6 = 22 \]

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.

\[ 49 + \frac{64}{8} \]

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.

Answer: A. \( 49 + \frac{64}{8} = 57 \)

56. Simplify.

\[ 3 \cdot 4 + 5 \cdot 5 \]

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.

Answer: A. \( 3 \cdot 4 + 5 \cdot 5 = 37 \)

57. Simplify.

\[ \frac{24 + 8}{2^3 - 2^2} \]

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

- A. \( \frac{24 + 8}{2^3 - 2^2} = \) __________
- B. The expression is undefined.

Answer: A. \( \frac{24 + 8}{2^3 - 2^2} = 8 \)
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. \((3 + 4) \cdot (10 - 6) = \quad \)
- B. The expression is undefined.

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

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

- The area of the square is \( \quad \) \((1)\) square meters.
- The perimeter of the square is \( \quad \) \((2)\) meters.

(1) \(\quad\) meters. \(\quad\) square meters.
(2) \(\quad\) meters. \(\quad\) square meters.

Answers 169

(1) square meters.
52
(2) meters.

60. Evaluate the expression for \(x = 5\) and \(z = 3\).

\[2xz - 3x\]

\[2xz - 3x = \quad \]

Answer: 15

61. Evaluate the expression for \(x = 2\) and \(y = 6\).

\[\frac{3y - 8}{x}\]

\[\frac{3y - 8}{x} = \quad \]

Answer: 5
62. Evaluate the expression for \( x = 22, y = 2, \) and \( z = 4. \)

\[
\frac{x + 3y}{z}
\]

\[
\frac{22 + 3(2)}{4} = \frac{22 + 6}{4} = \frac{28}{4} = 7
\]

Answer: 7

63. Evaluate the algebraic expression for the given value.

\[ x^2 - 2x + 8, \text{ for } x = 5 \]

When \( x = 5, \) \( x^2 - 2x + 8 = \)

\[
(5)^2 - 2(5) + 8 = 25 - 10 + 8 = 13 \Rightarrow \text{Ans}
\]

Answer: 23

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

\[
\frac{2x + 6y}{2x}
\]

\[
\frac{2(1) + 6(4)}{2(1)} = \frac{2 + 24}{2} = \frac{26}{2} = 13
\]

Answer: 13

65. Simplify.

\[ 8 + 4 \cdot 7 - 10 \]

\[
8 + 4 \cdot 7 - 10 = 8 + 28 - 10 = 36 - 10 = 26
\]

Answer: 26

66. Solve. Check your solution.

\[ x + 9 = 24 \]

The solution is \( x = \)

\[
x = 15
\]

Answer: 15
67. Solve.
\[ 3x = 36 \]
The solution is \[ x = \underline{12} \].
Answer: 12

68. Solve the following equation.
\[ 2x - 10 = 0 \]
\[ 2x - 10 + 10 = 0 + 10 \]
\[ 2x = 10 \]
\[ x = \frac{10}{2} \]
Answer: 5

69. Solve the equation.
\[ 5n + 35 = 55 \]
\[ 5n + 35 - 35 = 55 - 35 \]
\[ 5n = 20 \]
\[ n = \frac{20}{5} \]
Answer: 4

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

A fraction which represents the figure is \[ \frac{4}{7} \].
Answer: \[ \frac{4}{7} \]
71. Represent the shaded part of the group of circles with
   A. an improper fraction and
   B. a mixed number.

   \[ \frac{9}{4} \]
   \[ 2 \frac{1}{4} \]

   A. The improper fraction which represents the shaded area of the figure group is \( \frac{9}{4} \).
   B. The mixed number which represents the shaded area of the figure group is \( 2 \frac{1}{4} \).

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

   \[ \frac{11}{4} \]

   A. The improper fraction that represents the shaded area of the figure group is \( \frac{11}{4} \).
   B. The mixed number that represents the shaded area of the figure group is \( 2 \frac{3}{4} \).

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

   \[ \frac{11}{12} \]

   The fraction which represents the shaded region is \( \frac{11}{12} \).
74. Write a fraction to represent the shaded part of the figure.

The fraction representing the shaded part is \( \frac{5}{8} \).

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 \( \frac{4}{9} \).

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: \( \frac{5}{4} \) or \( 1 \frac{1}{4} \)
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.

\[ \frac{9}{2} \]

b. Write the shaded area as a mixed number.

\[ 4 \frac{1}{2} \]

Answers: \( \frac{9}{2} \), \( 4 \frac{1}{2} \)

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

\[ \frac{3}{8} \]

The fraction represented by the shaded parts is \( \frac{3}{8} \).

Answer: \( \frac{3}{8} \)

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

\[ \frac{3}{8} \]

The fraction that represents the shaded part is \( \frac{3}{8} \).

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.

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.

Answer: C.

$$\frac{4}{8} = \frac{1}{2}$$
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. [Xed] 
- E. None of the above.

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 $\frac{8}{15}$.

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

84. Graph the fraction on a number line.

Answer: $

85. Graph the fraction on a number line.

Answer: $

2/15/2019, 9:26 AM
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: \( 2 \times 2 \times 13 \)

Answer: \( 2^2 \times 13 \)

88. Find the prime factorization of the following number.

16

The prime factorization of 16 is: \( 2^4 \)

Answer: \( 2^4 \)

89. Find the prime factorization of the following number.

78

The prime factorization of 78 is: \( 2 \times 3 \times 13 \)

Answer: \( 3 \times 2 \times 13 \)

90. Perform the indicated operation.

\[ 6 + \frac{7}{11} \]

\[ 6 + \frac{7}{11} = \] (Simplify your answer.)

Answer: \( \frac{66}{7} \)

6 = \( 2 \times 3 \)
91. Perform the indicated operation.

\[
\frac{1}{3} \div \frac{7}{6} = \quad \text{(Type an integer or a simplified fraction.)}
\]

Answer: \(\frac{2}{7}\)

92. Find \(\frac{1}{4}\) of 140.

\(\frac{1}{4}\) of 140 is \(\frac{1}{4} \times 140 = 35\). (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 \(\frac{9}{10} \times 50 = 45\). (Simplify your answer.)

Answer: 45

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

3.799 \(\text{<}\) 3.8

Answer: <

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

0.755 \(\text{=}\) 0.75500

Answer: =
96. Round the decimal to the nearest tenth.
   0.94

0.94 rounded to the nearest tenth is __________.

Answer: 0.9

97. Round 0.7131 to the nearest thousandth.

0.7131 ≈ __________

Answer: 0.713

98. Round the monetary amount to the nearest dollar.

$90.72

$90.72 rounded to the nearest dollar is $__________.

Answer: 91

99. Write as a decimal.

\[
\frac{9}{100} = 3 + \frac{9}{100} = 3.09
\]

Answer: 3.09

100. Add the following.

8.2 + 5.33

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

Answer: 13.53

101. Subtract and check the following.

15 − 3.3

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

Answer: 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 \( \text{feet} \).

(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 $\text{________}.

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.

- A. 1 dime and 1 nickel
- B. 1 dime and 5 pennies
- C. 3 nickels and 6 pennies
- D. 3 nickels
- 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 \( \pi \). Then use the approximation 3.14 for \( \pi \) and approximate the circumference.

\[ C = \pi D \]

- \( C = \pi (32) \)
- \( C = 32 \pi \)
- \( C = 3.14 D \)
- \( C = 3.14 (32) \)
- \( C = 100.48 \)

\[ C = 3.14 \times 32 \]

\[ C = 100.48 \]

Answers 32\( \pi \)

106.48

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?

\[ \frac{1}{8.2} = \frac{6}{N} \]

\[ 1(N) = 8.2(6) \]

\[ N = 49.2 \]

Answer: 49.2 g

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 \( \text{square inches. (Type an integer or a decimal.)} \)

\[ A = \frac{L \times W}{2} \]

\[ A = \frac{3.5 \times 2.6}{2} \]

\[ A = 9.1 \]

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.)

\[
\frac{1}{39.37} = \frac{185}{N} \quad \text{(Cross multiply)}
\]

Answer: 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

111. Perform the indicated operation.

\[4.6 + 0.03 = 4.63\]

Answer: 4.63

112. Find the decimal equivalent of the following fraction.

\[\frac{14}{25} = 0.56\]

Answer: 0.56

113. Write as an equivalent decimal.

\[\frac{3}{4} = 0.75\]

Answer: 0.75

114. Write \(\frac{17}{20}\) as a decimal.

\[\frac{17}{20} = 0.85\]

Answer: 3.85
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.

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?

Choose the correct answer below.

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

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
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?

- 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.

\[ \sqrt{36} = 6 \]

Answer: 6
123. Find the length of the third side of the right triangle.

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

The length of the third side is \[ \boxed{5} \].

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.

\[ \text{leg} = 24, \text{leg} = 7 \]

\[ a = 24, \quad a^2 + b^2 = c^2 \]
\[ (24)^2 + (7)^2 = c^2 \]
\[ 576 + 49 = c^2 \]
\[ 625 = c^2 \]
\[ \sqrt{625} = c \]
\[ 25 = c \]

What is the length of the side not given?

\[ \boxed{25} \] (Round to the nearest thousandth as needed.)

Answer: 25

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

\[ \text{leg} = 13, \text{hypotenuse} = 85 \]

\[ a = 13, \quad a^2 + b^2 = c^2 \]
\[ (13)^2 + b^2 = (85)^2 \]
\[ 169 + b^2 = 7225 \]
\[ 169 + b^2 - 169 = 7225 - 169 \]
\[ 156 + b^2 = 7056 \]
\[ b^2 = 7056 - 156 \]
\[ b^2 = 7200 \]
\[ \sqrt{7200} = b \]
\[ 84 = b \]

The unknown length is \[ \boxed{84} \].

(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.

\[ \frac{a}{b} = \]
\[ \frac{21}{14} = \]
\[ \frac{3}{2} \]

The ratio of the corresponding sides of the first triangle to the second triangle is \[ \boxed{\frac{3}{2}} \].

(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.

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.

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

Answers

B. 20
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
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 \( \frac{6}{15} \). (Type an integer or a simplified fraction.)

Answer: \( \frac{2}{5} \)

131. Find the perimeter of the following figure.

![Rectangle Diagram]

12 ft  \quad 15 ft

Perimeter = (1) \_\_\_ \_\_ ft

(1) \_ ft

\( L = 15 \) ft, \( W = 12 \) ft

\( P = 2L + 2W = 2(15) + 2(12) = 30 + 24 = 54 \) ft

Answers 54

(1) ft

132. Find the perimeter of the following figure.

![Parallelogram Diagram]

47 cm  \quad 37 cm

Perimeter = (1) \_\_\_ \_\_ cm

(1) \_ cm

\( L = 47 \), \( W = 37 \)

\( P = 2L + 2W = 2(47) + 2(37) = 94 + 74 = 168 \) cm

Answers 168

(1) cm
133. Find the perimeter of the following figure.

The perimeter is _______ (1) _______ in.

(1) ○ sq. in.
○ in.

Answers 18

(1) in.

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

\[ P = A + B + C + D + E \]
\[ P = 11 + 14 + 11 + 12 + 19 \]
\[ P = 68 \]

Perimeter = _______ (1) _______

(1) ○ sq. ft.
○ ft.

Answers 68

(1) ft.

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

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

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.

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

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.

140. Convert the measurement indicated.

132 in to feet

132 in = □□□□□ ft

Answer: 11
141. Convert the measurement as indicated.

13 yd to feet

13 yd = [ ] ft

Answer: 39

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

12 ( ) 17

(1) <
(2) >
(3) =

Answer: (1) <

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

8 ( ) 4

Answer: >

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

\[(6 + a) + 6 = \]

\[(6 + a) + 6 = \]

Answer: \[a + 12\]
145. Find the x- and y-coordinates of the point C.

The coordinates of C are (2, 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
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.

<table>
<thead>
<tr>
<th>x</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Use the graphing tool to graph the equation.

Answers

-1

2
148. Graph the equation.

\[ y = 2x + 5 \]

Use the graphing tool to graph the line.

Answer:

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.

The volume is \( \boxed{729} \) cubic centimeters. (Type an integer or a decimal.)

Answer: 729