Student Name: _____

Class: _____

Date: _____

Instructions: **Read each question carefully and circle the correct answer.**

1. What is the value of z?

$26.5 = z + (2.3 + 7.7)$

A. 2.65
B. 36.5
C. 16.5
D. 26.5

2. What is the value of m?

$m - (15 - 4 - 2) = 2$

A. 9
B. 7
C. 14
D. 11

3. What is the value of m?

$13.5 = 5.1 - m - 6.1$

A. 2.3
B. 24.6
C. -14.5
D. 24.7

4. Solve for m.

$$6m = \frac{-1}{3}$$

    A.   m = 2
    B.   m = -2
    C.   m = -1/18
    D.   m = -18

5. Solve for x.

$$\frac{3}{5}x = -60$$

    A.   x = 100
    B.   x = -100
    C.   x = 36
    D.   x = -36

6. What is the value of y?

$$4y = 48.16$$

    A.   12.4
    B.   192.64
    C.   12.04
    D.   196.64

7. A possible step toward solving these equations by addition could be:

$$3x - 2y = 2$$
$$4y + 4x = 3$$

    A.   adding 3x and 4x
    B.   solving for x in the equation 2x = 1
    C.   multiplying 3x - 2y = 2 by 4 and 4y + 4x = 3 by -3
    D.   multiplying 3x - 2y = 2 by -2

8. Solve this system of equations.

$x = y + 2$
$2y - 3x = 15$

    A. $x = 11, y = 9$
    B. $x = -7, y = -9$
    C. $x = 23, y = 21$
    D. $x = -19, y = -21$

9. The first step toward solving these equations by addition could be:

$8x - 3y = 3$
$-2 = 2x + 2y$

    A.   solving for y or x in one equation
    B.   subtracting -2x from 8x
    C.   adding -2y to -3y
    D.   multiplying $-2x - 2y = 2$ by 4

10. Cody worked 42.5 hours per week in July. This is 12.25 hours more per week than he worked in June.

How many hours did Cody work per week in June?

    A.   3.47 hours
    B.   520.63 hours
    C.   54.75 hours
    D.   30.25 hours

11. Bryce drove 200 miles to his grandparents house. This is 50 miles more than three times the distance to his Aunt Lindsay's house. What is the distance to his Aunt Lindsay's house?

    A.   50 miles
    B.   65 miles
    C.   450 miles
    D.   750 miles

12. A car is driving at a rate of 61 miles per hour.

At this rate, how long will it take for the car to drive 323.3 miles?

    A.   6 hours
    B.   5.3 hours
    C.   2.65 hours
    D.   2.62 hours

13.

☐ is to ▩ as ◯ is to _____.

Choose one of the following to complete the sentence:

A	B	C	D
●	▧	○	☐

    A.   A
    B.   B
    C.   C
    D.   D

14.

△ is to ■ as ☐ is to ___.

Choose one of the following to complete the sentence.

A	B	C	D
◇	☐	▼	■

    A.   A
    B.   B
    C.   C
    D.   D

15. Find the missing number.

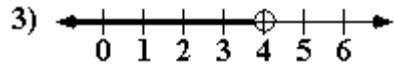97, 95, ?, 91, 89

    A.   94
    B.   100
    C.   93
    D.   92

**16.** Examine Cheryl's solution.

1) $8n \leq 32$

2) $n \leq 4$

3)
    0 1 2 3 4 5 6

Where did Cheryl make an error?

A.   She solved for n incorrectly in Step 1.
B.   She should have used closed circles on her graph.
C.   She should have shaded the opposite way to show that it is greater than.
D.   She should have flipped the inequality sign in Step 2.

17. Choose the option which shows the inequality expressed on a number line.

$x < 8$
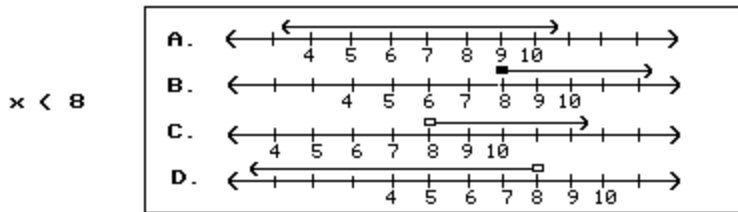
A.   A
B.   B
C.   C
D.   D

18. What is the value of <u>n</u> in the given statement?

$8n < 40$

A. $n < 5$

B. $n \leq 5$

C. $n > 4$

D. $n \geq 4$

19. Seven students attended the music festival. Tickets to the music festival cost $3.50 each. How much does it cost four people to attend the music festival?

A. $38.50
B. $24.50
C. $10.50
D. $14.00

20. Lydia weighs 7 times as much as Andre. Andre weighs half as much as Stephanie. Wendell weighs 88 pounds. Jillian weighs 158 pounds. Kyle weighs 1/5 as much as Lydia. Stephanie weighs 78 pounds. How much does Kyle weigh?

A. 22.29 pounds
B. 156 pounds
C. 54.6 pounds
D. 49.2 pounds

21. There were 50 people at the birthday party. Joan invited 125 people. Of those who attended, only 36% brought gifts. How many guests brought gifts?

A. 125 people
B. 50 people
C. 18 people
D. 32 people

22. Find the operational symbol.

$23 ? 64 = 1,472$

A. x
B. +
C. -
D. ÷

23. Find the operational symbol.

$16 ? 13 = 208$

A. x
B. +
C. -
D. ÷

24.   Find the missing number.

$13 + 14 = 30 - ?$

A.   3
B.   27
C.   57
D.   17

25.   Heidi weighs 3 times more than Shelby. Shelby weighs half as much as Dennis. Dennis weighs 89 pounds. How much does Heidi weigh?

A.   445 pounds
B.   44.5 pounds
C.   133.5 pounds
D.   267 pounds

26.   During the first 5 weeks of the cookie sale, Jill sold $578 worth of cookies each week. During the final 4 weeks of the cookie sale, Jill sold $352 worth of cookies each week. In total, how much did Jill sell?

A. $2,890 worth of cookies
B. $1,482 worth of cookies
C. $1,408 worth of cookies
D. $4,298 worth of cookies

27.   One bookshelf holds 75 encyclopedia books. A set of encyclopedias contains 125 books. Hugo bought 3 sets of encyclopedias. How many shelves will Hugo need to hold his encyclopedia books?

A.   150 shelves
B.   15 shelves
C.   375 shelves
D.   5 shelves

28.   Round to the nearest cent when necessary.

Which of the following is the best price?

A.   11 for $6.55
B.   19 for $9.87
C.   35 for $16.98
D.   1 for $0.55

29.   Round to the nearest cent when necessary.

Stanley sells 99 pieces of gum for $5.65.

How much does one piece of gum cost?

A. $0.05
B. $0.06
C. $0.63
D. $0.57

30.   Round to the nearest cent when necessary.

14 bagels cost $4.98.

How much does one bagel cost?

A. $0.36
B. $0.42
C. $1.25
D. $0.12

31.
$$\text{If } \frac{15}{45} = \frac{x}{3}, \text{ then } x \text{ is } \underline{\quad ? \quad}.$$

A.   45
B.   15
C.   1
D.   3

32.   Which symbol would make this proportion true?

$$\frac{3}{7} \quad ? \quad \frac{8}{18}$$
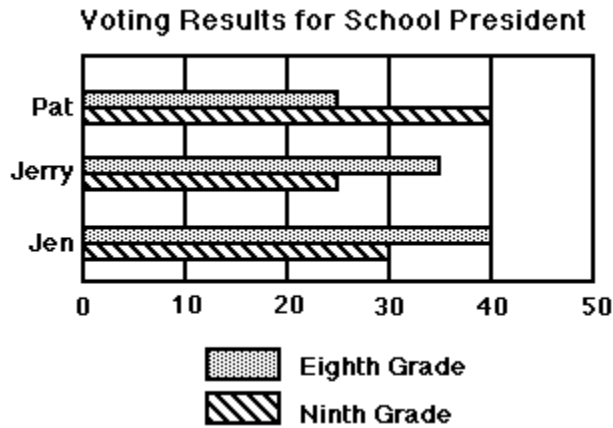
A.   =
B.   <
C.   >

33. Round your answer to the nearest hundredth when necessary.

To get a certain shade of purple, Ginnie needs to mix red paint with blue paint in the ratio of 6:7.

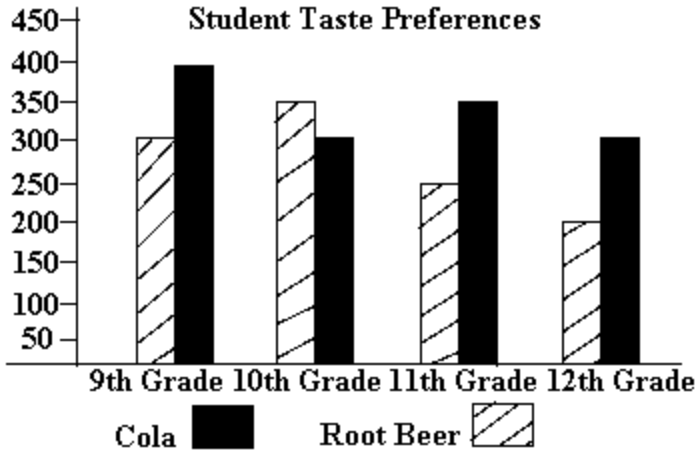How many quarts of red paint does Ginnie need to mix with 11 quarts blue paint?

A. 12.83 quarts
B. 462 quarts
C. 9.43 quarts
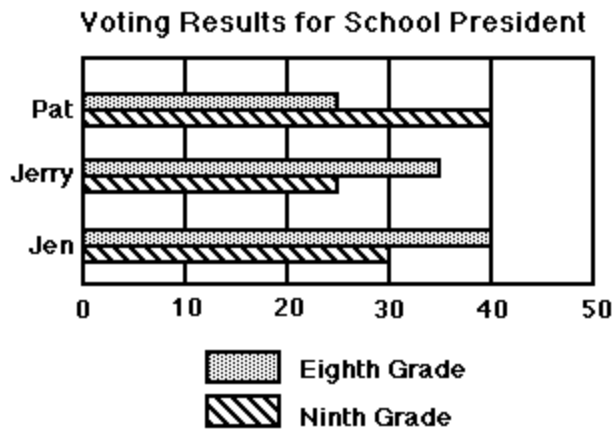D. 0.08 quarts

34. Which student won the election?

Voting Results for School President

A. Pat
B. Jerry
C. Jen
D. Pat and Jen tied

35. How many more 9th grade students preferred cola than root beer?

Student Taste Preferences

 A. 150 students
 B. 200 students
 C. 100 students
 D. 50 students

36. How many students in the eighth grade voted for Jerry?

Voting Results for School President

 A. 40 students
 B. 25 students
 C. 60 students
 D. 35 students

37. Use the graph to answer the question.

Video Game Sales

How many video games were sold in February?

A.   5
B.   10
C.   15
D.   25

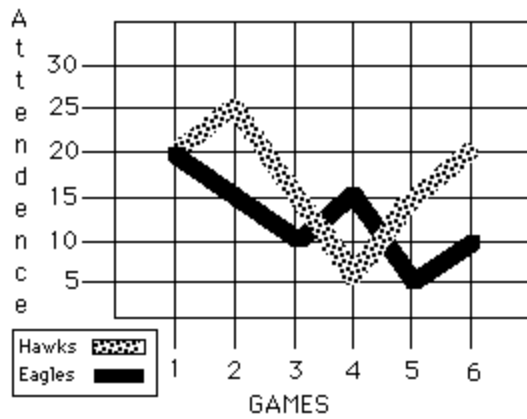**38.** Use the graph to answer the question.
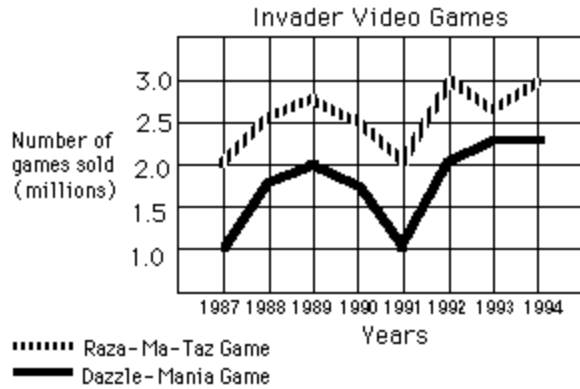
In 1994, how many Raza-Ma-Taz Games were sold?

A.   30 million games
B.   3 million games
C.   1.5 million games
D.   2.5 million games

39. The Hawks and the Eagles are two hockey teams. This graph represents the attendance for each team. The attendance is given in thousands.

At Game 2, how many people were in attendance at the Hawks' game?

A. 25,000 people
B. 15,000 people
C. 10,000 people
D. 20,000 people

40. If you were to draw a card from a standard deck, what is the probability of drawing a 2 of spades?

A. 1/13
B. 1/26
C. 3/13
D. 1/52

41. If you were to draw a card from a standard deck, what is the probability of drawing a Jack?

A. 1/13
B. 1/26
C. 3/13
D. 1/52

42. There are 5 boys with blonde hair, 11 boys with brown hair, 6 boys with black hair, 3 boys with red hair, and 2 boys with green hair.

If you closed your eyes and picked 1 boy, what is the probability that you will pick a boy that does not have brown hair?

A. 1 11/27
B. 11/27
C. 16/27
D. 0

43. Use the table to answer the question. Round to the nearest cent when necessary.

	Pencils	Pens	Folders	Binders
STORE A	12 for $1.10	12 for $1.50	3 for $0.90	$1.59 each
STORE B	10 for $0.90	10 for $1.25	5 for $1.15	2 for $3.00
STORE C	6 for $0.60	6 for $0.90	$0.25 each	3 for $5.00
STORE D	20 for $1.99	20 for $2.99	10 for $2.75	10 for $9.99
STORE E	$0.10 each	$0.15 each	15 for $3.75	5 for $5.00
STORE F	5 for $0.50	5 for $0.75	2 for $0.45	6 for $6.25

Which store is the <u>most</u> expensive for one folder?

A. store D
B. store A
C. store E
D. store C

44. Use the table to answer the question. Round to the nearest cent when necessary.

	Pencils	Pens	Folders	Binders
STORE A	12 for $1.10	12 for $1.50	3 for $0.90	$1.59 each
STORE B	10 for $0.90	10 for $1.25	5 for $1.15	2 for $3.00
STORE C	6 for $0.60	6 for $0.90	$0.25 each	3 for $5.00
STORE D	20 for $1.99	20 for $2.99	10 for $2.75	10 for $9.99
STORE E	$0.10 each	$0.15 each	15 for $3.75	5 for $5.00
STORE F	5 for $0.50	5 for $0.75	2 for $0.45	6 for $6.25

Which store is the <u>least</u> expensive for one pencil?

A.　　store D
B.　　store C
C.　　store B
D.　　store F

45. Use the table to answer the question. Round to the nearest cent when necessary.

	Pencils	Pens	Folders	Binders
STORE A	12 for $1.10	12 for $1.50	3 for $0.90	$1.59 each
STORE B	10 for $0.90	10 for $1.25	5 for $1.15	2 for $3.00
STORE C	6 for $0.60	6 for $0.90	$0.25 each	3 for $5.00
STORE D	20 for $1.99	20 for $2.99	10 for $2.75	10 for $9.99
STORE E	$0.10 each	$0.15 each	15 for $3.75	5 for $5.00
STORE F	5 for $0.50	5 for $0.75	2 for $0.45	6 for $6.25

How much more is <u>one</u> folder at Store A than at Store E?

A.　　$0.05
B.　　$0.01
C.　　$0.03
D.　　The item is the same price at both stores.

46. Find the value of the ? in the given statement.

$$98,000 = 9.8 \times 10^?$$

A. -5
B. -4
C. 5
D. 4

47. Find the value of the ? in the given statement.

$$9.8 \times 10^5 = ?$$

A. 98,000
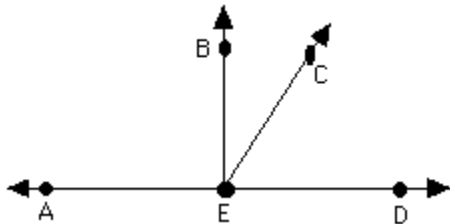B. 980,000
C. 9,800,000
D. 980

48. Find the value of the ? in the given statement.

$$0.005 = 5 \times 10^?$$

A. 4
B. 2
C. -2
D. -3

49. $\angle$AEC and $\angle$CED are supplementary. $\angle$CED is equal to 62°.

What is the measure of $\angle$AEC?

A. 28°
B. 152°
C. 118°
D. 124°

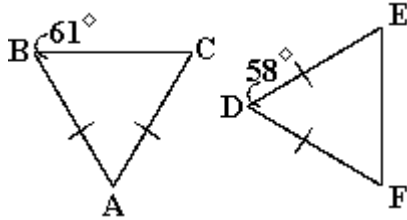**50.** Which of the following is the measure of a right angle?

  A. 180°
  B. 90°
  C. 0°
  D. 45°

51. Which of the following is the measure of an acute angle?
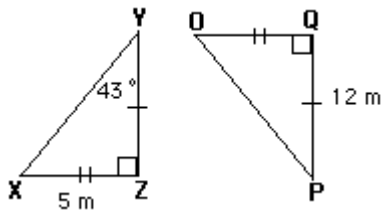
  A. 94°
  B. 179°
  C. 91°
  D. 44°

52. These two triangles are congruent.

What is the measure of ∠DFE?
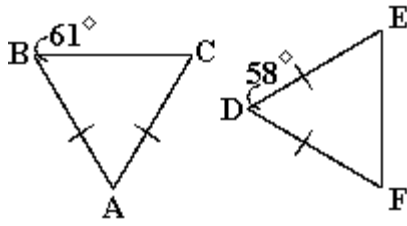
  A. 119°
  B. 58°
  C. 61°
  D. 122°

53. These two triangles are congruent.

What is the measurement of ∠QOP?
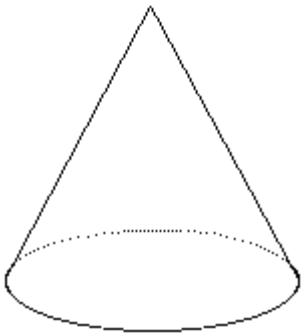
  A. 43°
  B. 90°
  C. 47°
  D. 37°

54. These two triangles are congruent.

What is the measure of ∠BAC?

A. 58°
B. 61°
C. 119°
D. 177°

55. What is the name of the figure?

A. cylinder
B. sphere
C. cone
D. triangular prism

56. A pentagonal prism has 7 faces.

How many vertices does it have?

A. 15 vertices
B. 14 vertices
C. 7 vertices
D. 10 vertices

57. A rectangular pyramid has 5 faces.

How many edges does it have?

A. 15 edges
B. 8 edges
C. 5 edges
D. 25 edges

58. Holly, Pedro, Oliver, Chris, and Tammy drew different geometric figures: a circle, a pentagon, a trapezoid, a hexagon, and an octagon. No person's name begins with the same first letter as that person's drawing. Chris, Pedro, and Tammy drew figures with more than 4 sides. Chris' drawing has the most sides. Oliver's drawing has exactly one pair of parallel lines.

What did Chris draw?

A. circle
B. octagon
C. hexagon
D. pentagon

59. Felix, Amy, Ruth, Kelsey, and Heather have different part-time jobs: fast food, a hair salon, a gas station, the zoo, and Aquatic World. No person's name begins with the same first letter as that person's job. Felix and Heather do not like animals. Kelsey comes home from work smelling like gasoline.

Where does Amy work?

A. fast food
B. a hair salon
C. the zoo
D. Aquatic World

60. Holly, Pedro, Oliver, Chris, and Tammy drew different geometric figures: a circle, a pentagon, a trapezoid, a hexagon, and an octagon. No person's name begins with the same first letter as that person's drawing. Chris, Pedro, and Tammy drew figures with more than 4 sides. Chris' drawing has the most sides. Oliver's drawing has exactly one pair of parallel lines.
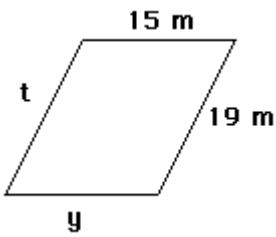
Which person drew the pentagon?

A. Pedro
B. Tammy
C. Chris
D. Oliver

61. In the figure below, how many diagonals can be drawn from vertex D?
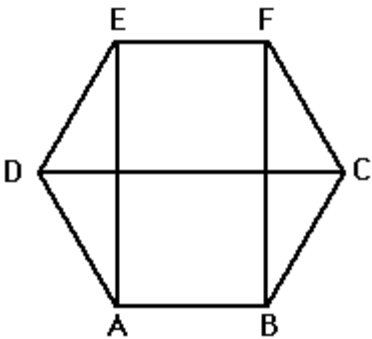
A
B   E
C   D
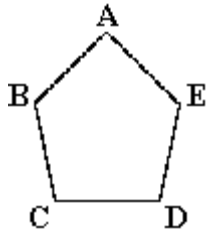
A. two
B. three
C. four
D. five

62. What is the value of y in the parallelogram?

15 m
t
19 m
y

A. 146 m
B. 17 m
C. 19 m
D. 15 m

63. What type of polygon is ABCFED?

E   F
D   C
A   B

A. pentagon
B. hexagon
C. octagon
D. decagon

64. Choose the coordinates of the point that is the reflection over the x-axis of the point A (5, -1).

    A.   (5, 1)
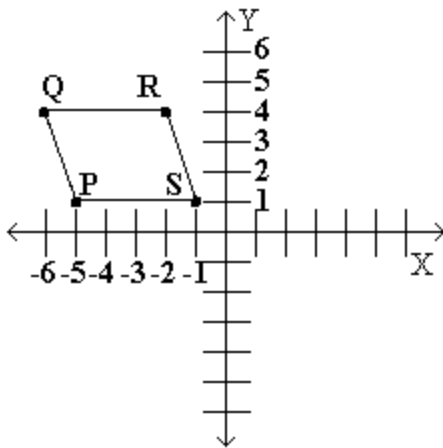   B.   (-5, 1)
    C.   (-5, -1)
    D.   (5, -1)

65. Choose the coordinates of the point that is the reflection over the x-axis of the point Q (6, 3).

    A.   (-6, 3)
    B.   (-6, -3)
    C.   (6, -3)
    D.   (6, 3)

66. The equations of a translation are $x' = x - 4$ and $y' = y + 3$. What is the translation of point A (-3, 2)?
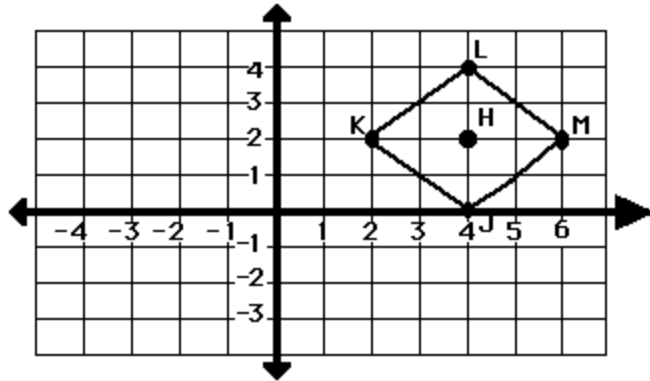
    A.   (-7, 5)
    B.   (-1, 5)
    C.   (-2, 0)
    D.   (-1, -1)

67. If point Q was reflected about the y-axis, what would be its new coordinates?

    A.   (6, 4)
    B.   (-6, 4)
    C.   (6, -4)
    D.   (-6, -4)

68. What will the coordinates of point L be if figure LMJK is rotated around point H so that point J is at (4, 4)?

A. (4, 0)
B. (2, 2)
C. (6, 2)
D. (4, 4)

69. The line of symmetry for figure ABCD is line BC. What is the reflection point of point A?
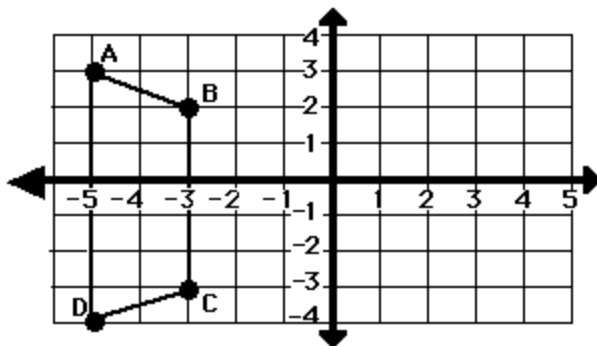
A. (-5, 3)
B. (-5, 4)
C. (-1, 3)
D. (5, 3)

70. Choose the best estimate for the length of a dog.

A. 2.5 cm
B. 2.5 km
C. 2.5 in
D. 2.5 ft

71. Choose the best estimate for the thickness of a textbook.

    A.   1.5 in
    B.   1.5 mm
    C.   1.5 km
    D.   1.5 ft

72. Choose the measurement that is the most precise.

    A.   34.2 mm
    B.   3.4 cm
    C.   3.4 m
    D.   They are all of equal precision.

73. Find the area:

88.1 m

87.6 m
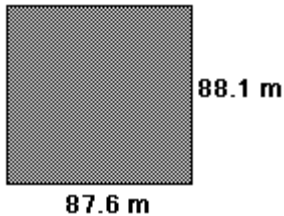
    A.   351.4 square meters
    B.   7,717.56 square meters
    C.   702.8 square meters
    D.   3,858.78 square meters

74. Find the area:

17.06 cm

3.1 cm
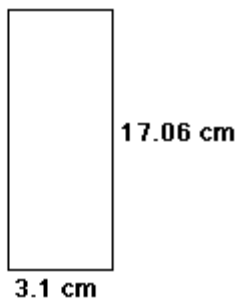
    A.   80.64 square centimeters
    B.   52.886 square centimeters
    C.   40.32 square centimeters
    D.   26.443 square centimeters

75. Find the area:

```
        ┌──────────────┐
        │              │
        │              │ 27 cm
        │              │
        └──────────────┘
            14.8 cm
```
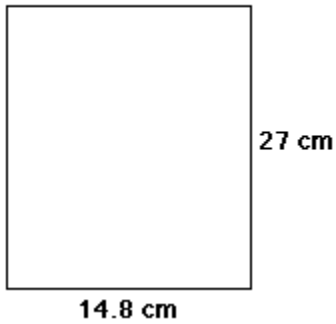
    A. 83.6 square centimeters
    B. 41.8 square centimeters
    C. 199.8 square centimeters
    D. 399.6 square centimeters

76. 3.2 miles = _?_ yd

    A. 16,896
    B. 115.2
    C. 1,686
    D. 5,632

77. 17,600 yd = _?_ miles

    A. 0.5 mi
    B. 1 mi
    C. 100 mi
    D. 10 mi

78. 370 cm = _?_ dm

    A. 0.037
    B. 0.37
    C. 37
    D. 3.7

79. Which of the following is the best unit of measure for a glass of water?

    A. milligram
    B. hectoliter
    C. milliliter
    D. kilogram

80. 0.5 ton = __?__ g

    A. 0.005
    B. 5
    C. 5,000
    D. 500,000

81. 0.2 mg = __?__ g

    A. 0.2
    B. 0.02
    C. 0.0002
    D. 0.002

82. What is the perimeter of the figure?
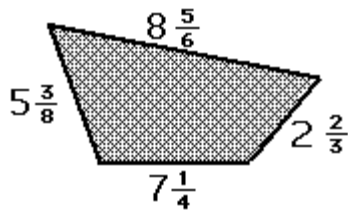
    A. 22 1/8
    B. 12 1/8
    C. 24 1/8
    D. 14 1/8

83. Sunjung and Dave built a square sandbox for the neighborhood kids. One side of the sandbox is 15 feet long.

What is the perimeter of the sandbox?

    A. 60 feet
    B. 225 feet
    C. 120 feet
    D. 45 feet

84. What is the perimeter of the figure?

16.4 m 5 m
51.5 m
14.9 m
32.8 m
15.2 m
52.1 m
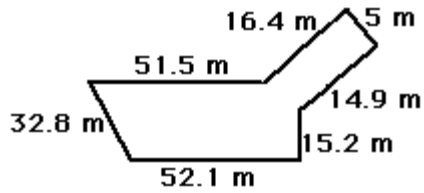
A. 187.9 m
B. 82.95 m
C. 93.95 m
D. 165.9 m

85. This is the layout of the McDougal's backyard. The scale is 1 centimeter to 5 meters. The actual area of the deck is 350 square meters. The length of the deck is 35 meters.

DECK
POOL Changing House
WALK-WAY
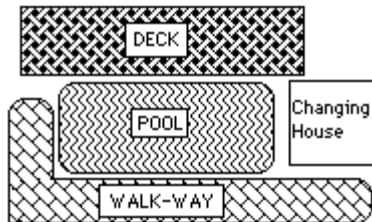
What is the area of the deck on the layout?

A. 14 square centimeters
B. 87.5 square centimeters
C. 17.5 square centimeters
D. 70 square centimeters

86. This is a scale drawing of Lincoln Junior High School.

The scale used is 3.5 inches equals 7 feet. What is the actual length of the library?

A. 28 feet
B. 98 feet
C. 14 feet
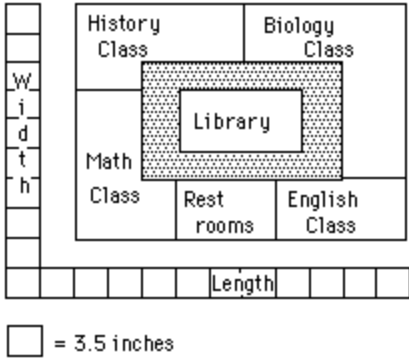D. 24.5 feet

87. This is the layout of the McDougal's backyard. The scale is 1 centimeter to 5 meters. The actual area of the pool is 375 square meters. The length of the pool is 25 meters.
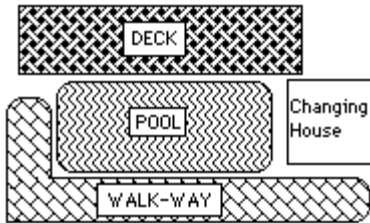
What is the area of the pool on the layout?

A. 93.75 square centimeters
B. 15 square centimeters
C. 18.75 square centimeters
D. 75 square centimeters

88. On Saturday, the low temperature was -14° C and the high temperature was -3° C.

What was the temperature range for Saturday?

A. 17° C
B. 11° C
C. 4° C
D. 42° C

89. In July, the high temperature was 32° C. The low temperature was 24° C.

What was the mean temperature for the month of July?

A.   56° C
B.   8° C
C.   28° C
D.   16° C

90. On Wednesday, the temperature was 3° C. The temperature dropped 9° C on Thursday.

What was the temperature on Thursday?

A.   -6° C
B.   12° C
C.   6° C
D.   -12° C

91. Solve:

? km = 937 m

Hint:
    1 kilometer (km) = 1,000 meters (m)
    1 hectometer (hm) = 100 meters
    1 dekameter (dam) = 10 meters

A.   97,300
B.   9,370
C.   0.937
D.   9.37

92. Solve:

5 m = ? cm

Hint:
    1 meter = 10 decimeters (dm)
    1 meter = 100 centimeters (cm)
    1 meter = 1,000 millimeters (mm)

A.   50
B.   500
C.   5,000
D.   50,000

93. Solve:

9.63 m = ? cm

Hint:

1 meter = 10 decimeters (dm)
1 meter = 100 centimeters (cm)
1 meter = 1,000 milimeters (mm)

A. 963
B. 9.63
C. 96,300
D. 9,630

94. Find the volume of the block.
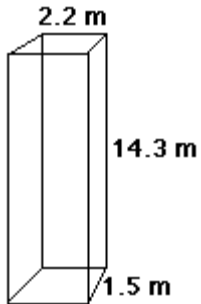
A. 47.19 cubic meters
B. 18 cubic meters
C. 32.96 cubic meters
D. 94.38 cubic meters

95. What is the volume of a block that is 3 meters long, 2 meters wide and 1.5 meters high?

A. 6.5 cubic meters
B. 8 cubic meters
C. 9.5 cubic meters
D. 9 cubic meters

96. What is the volume of a block that is 4 centimeters long, 10 centimeters wide and 3.4 centimeters high?

A. 108 cubic centimeters
B. 136 cubic centimeters
C. 17.4 cubic centimeters
D. 43.3 cubic centimeters

97.   Which of the following could be the value of y?

6.25 = y

A.   6.25%
B.   62.5%
C.   625%
D.   0.0625%

98.   Which of the following number sentences is true?

A.   0.5 > 1/2
B.   -2/5 = 5/2
C.   3/4 = 0.75
D.   10/2 < 5

99.   Which of the following statements is true?

A.   19.9 < 20.1
B.   5.01 > 5.1
C.   7.25 < 7 1/4
D.   1/2 > 2/4

100.   Which of the following is another way to write 35%?

A.   3.5
B.   0.35
C.   35/10
D.   3 5/10

101.   Which of the following is another way to write 0.59.

A.   59%
B.   5.9%
C.   590%
D.   0.59%

102.   Which of the following is another way to write 72%?

A.   7 1/5
B.   7.2
C.   18/25
D.   0.072

103. Round 132,236.78934 to the nearest thousandth.

    A. 132,236.789
    B. 132,000
    C. 132.236.80
    D. 132.236.790

104. Round 678.374387 to the nearest ten thousandth.

    A. 678.370
    B. 678
    C. 678.37439
    D. 678.3744

105. Round 62.58912 to the nearest hundredth.

    A. 62.589
    B. 63
    C. 62.59
    D. 60

106. Amaya is the entertainment writer for the school paper. She is allowed to use 2 pages for her articles. There are 30 lines of type on each page. The sports section is 3 pages long. The average line contains 15 words. How many words are there in Amaya's entertainment section?

    A. 120 words
    B. 900 words
    C. 1350 words
    D. 150 words

107. It takes Janet 10 minutes to walk 1/2 of a mile. How much time will Janet spend walking this week if she walks 5 miles every day (Sunday - Saturday)? Choose the best answer.

    A. 107,100 seconds
    B. 1 day, 5 hours, and 45 minutes
    C. 29 hours and 45 minutes
    D. 700 minutes

108. Which word best describes the following: 2x, 4x, 8x ?

    A. Like terms
    B. Constants
    C. Variables
    D. Unlike terms

109. Find the greatest common factor of 45 and 66.

    A.   6
    B.   9
    C.   5
    D.   3

110. Which of the following numbers is <u>not</u> evenly divisible by 11?

    A.   99
    B.   110
    C.   264
    D.   111

111. Find the common factors of 18 and 24.

    A.   4, 8, 9, 12, 18, 24
    B.   3, 4, 6, 8
    C.   1, 2, 3, 6
    D.   1, 18, 24

112. What does the digit 7 mean in <u>7</u>,234,223?

    A.   7 thousands
    B.   7 hundreds
    C.   7 billions
    D.   7 millions

113. What does the digit 2 mean in 958,00<u>2</u>,595,369?

    A.   2 hundred thousands
    B.   2 millions
    C.   2 ten millions
    D.   2 billions

114. What does the digit 3 mean in <u>3</u>26,879,175?

    A.   3 hundreds
    B.   3 thousands
    C.   3 hundred thousands
    D.   3 hundred millions

115. Identify the following number as either <u>prime</u> or <u>composite</u>.
51

    A.   prime
    B.   composite

116. Identify the following number as either <u>prime</u> or <u>composite</u>.

59

    A.   prime
    B.   composite

117. Which of the following shows 24 as a sum of prime numbers?

    A. $20 + 4$
    B. $9 + 10 + 5$
    C. $5 + 19$
    D. $20 + 2 + 2$