Kansas City Area Teachers of Mathematics
2018 KCATM Contest

GEOMETRY AND MEASUREMENT TEST
GRADE 4
#51- 90

INSTRUCTIONS

- **Do not open this booklet** until instructed to do so.

- Time limit: **15 minutes**

- You **may use calculators** on this test.

- Use **3.14** as the approximation for pi.

- Mark your answer on the answer sheet by **FILLING in the circle.**

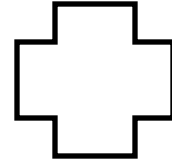- You **may not use rulers, protractors, or other measurement devices** on this test.

Mark your answers for this test from #51 - #90.

Student Name _____ Student Number _____

School _____

51. How many lines of symmetry does this figure have?

  A. 2   B. 4   C. 6   D. 8   E. None of the above
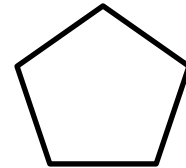
52. Which statement is **true**?

  A. A square can have acute and
     obtuse angles.

  B. A rectangle can have acute and obtuse
     angles.

  C. A parallelogram can have acute
     and obtuse angles.

  D. A rhombus must have all right angles.

  E. None of the above

53. Floor tiles in schools measure 1 ft. by 1 ft. which is an area of 1 square foot. How many tiles would be needed in a room that is 20 feet by 30 feet?

  A. 50   B. 60   C. 300   D. 600   E. None of the above

54. How many lines of symmetry are in this figure with all equal sides and all equal angles?
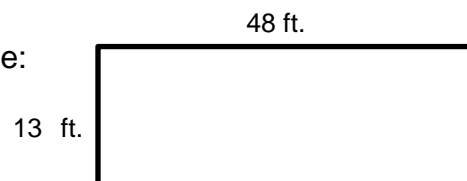
  A. 2   B. 4   C. 6   D. 8   E. None of the above

55. You are watering your plants and have 3 gallons of water. You want to pour the 3 gallons into smaller pint containers so the water is easier to carry to your garden. How many pints will you have?

  A. 24   B. 16   C. 12   D. 3   E. None of the above

56. Find the **perimeter** of the following rectangle:

48 ft.

13 ft.

  A. 120 ft.   B. 121 ft.   C. 122 ft.   D. 123 ft.   E. None of the above
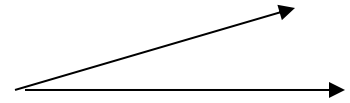
57. What is the greatest number of obtuse angles in quadrilateral?

  A. 0   B. 1   C. 2   D. 3   E. None of the above

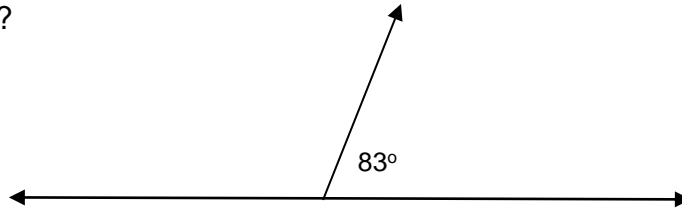58. Which figures have 2 pair of parallel sides?

  A. Square   B. Parallelogram   C. Rectangle   D. Rhombus   E. All of them

59. What is the most reasonable measure of the following angle?
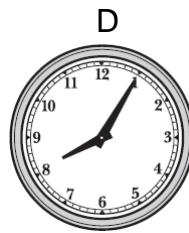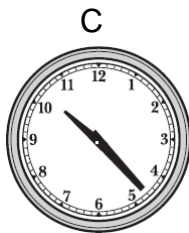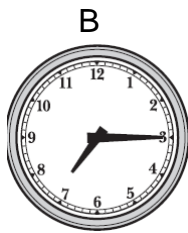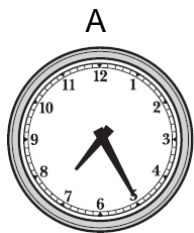
  A. 1°   B. 20°   C. 57°   D. 80°   E. None of the above

60. A straight angle has a measure of 180°. If the following diagram is given, what is the measure of the obtuse angle?
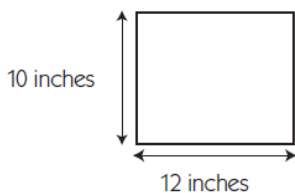
83°

  A. 83°   B. 78°   C. 100°   D. 97°   E. None of the above

61. It is 7:10 pm in the summer and you are at your friend's house playing chess. You must be home in 15 minutes, which of the following clocks gives you the correct time you need to be home?

      A   B   C   D   E. None of the above

62. You are making placemats for your cafeteria for a special occasion. You want to put lace around the construction paper below that measures 10 in. by 10 in. If you are going to make 100 of them, how many inches of lace will you need for your project?
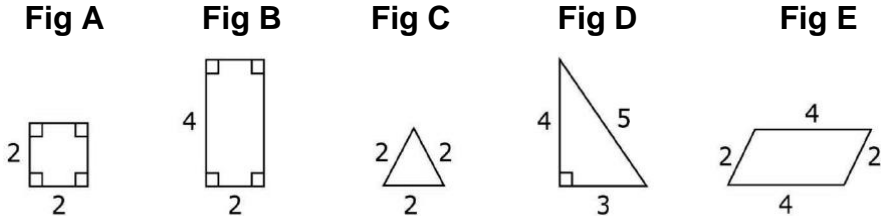
10 inches

12 inches

  A. 220 in.   B. 2,200 in.   C. 4,400 in.   D. 4,800 in.   E. None of the above

63. Two kilometers = _____ meters

  A. 2m   B. 20m   C. 200m   D. 2,000m   E. None of the above
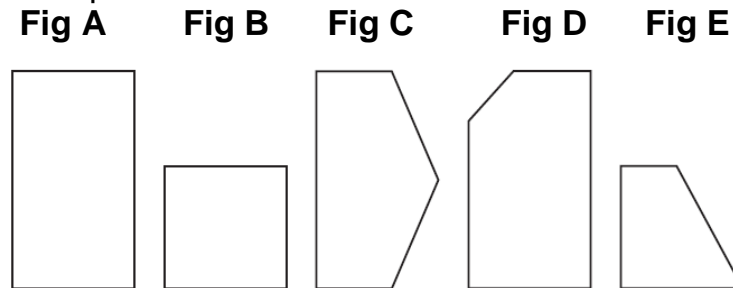
64. Which of these Figures have the same perimeter?

  Fig A   **Fig B**   **Fig C**   **Fig D**   **Fig E**

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

65. Which statement best describes the figure below?

  A. The figure is a cylinder with a height shorter than the diameter of the figure.
  B. The figure is a cylinder with a height greater than the diameter of the figure.
  C. The figure is a circle with a height shorter than the diameter of the figure.
  D. The figure is a circle with a height shorter than the diameter of the figure.
  E. None of the above

66. Which figures are quadrilaterals?

  Fig A   **Fig B**   **Fig C**   **Fig D**   **Fig E**

  A. A,B,C   B. A,B,E   C. C,D   D. A,B,D,E   E. None of the above
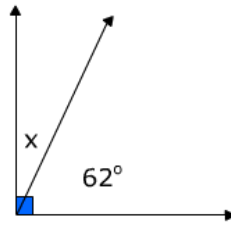
67. How many degrees are there in ¾ of a circle?

  A. 90º   B. 180º   C. 270º   D. 360º   E. None of the above

68. What is the geometric name for the shape of a stop sign?

  A. Pentagon   B. Hexagon   C. Heptagon   D. Octagon   E.None of the above

69. The following two angles form a right angle. What is the value of "x"?
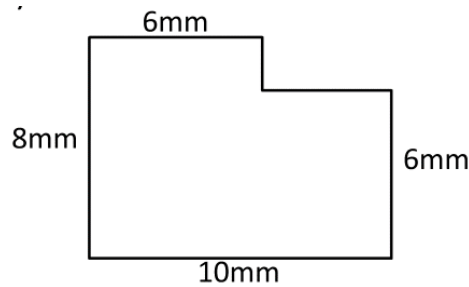

A. 28°   B. 38°   C. 62°   D. 118°   E. None of the above

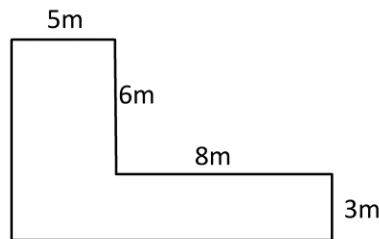70. When looking at the window below, what geometric concepts does it show?

A. Parallel lines   B. Rectangles

C. Perpendicular lines   D. All of the above

E. None of the above

71. What is the perimeter of the figure below?
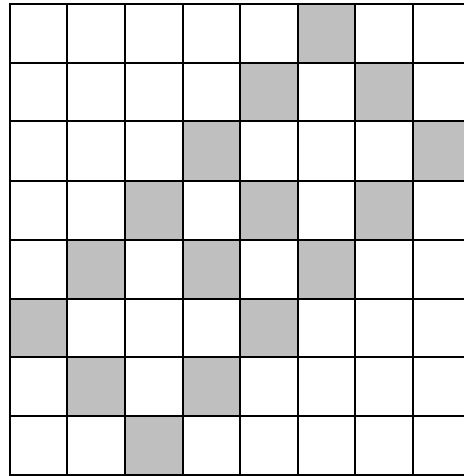

A. 30 mm   B. 34 mm   C. 36 mm   D. 38 mm   E. None of the above

72. Find the area of the **L-shaped** figure. **Area of a rectangle = length x width**

A. 45 m²   B. 69 m²   C. 179 m²   D. 720 m²   E. None of the above

73. Find the total area of the shaded squares if each side of the squares is 3 inches. The area of a rectangle formula is: Area = length x width
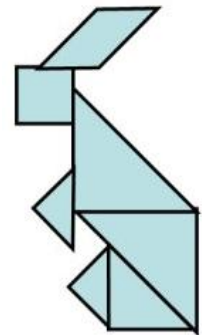
A. 16 in^2 B. 48 in^2 C. 96 in^2 D. 144 in^2 E. None of the above

74. In a case of soda, there are 24 cans. If each can has 12 ounces, and there are 8 ounces in a cup. How many cups of soda are in a case?

A. 36 cups   B. 44 cups   C. 48 cups   D. 60 cups   E. None of the above

75. Identify all of the geometric figures in the tangram puzzle solution:

A. Square, Parallelogram   B.   Triangles, Square

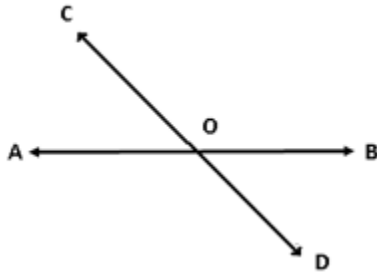C. Parallelogram, Triangles   D. Parallelogram, Triangles, Square

E. None of the above

76. What is the geometric shape below?

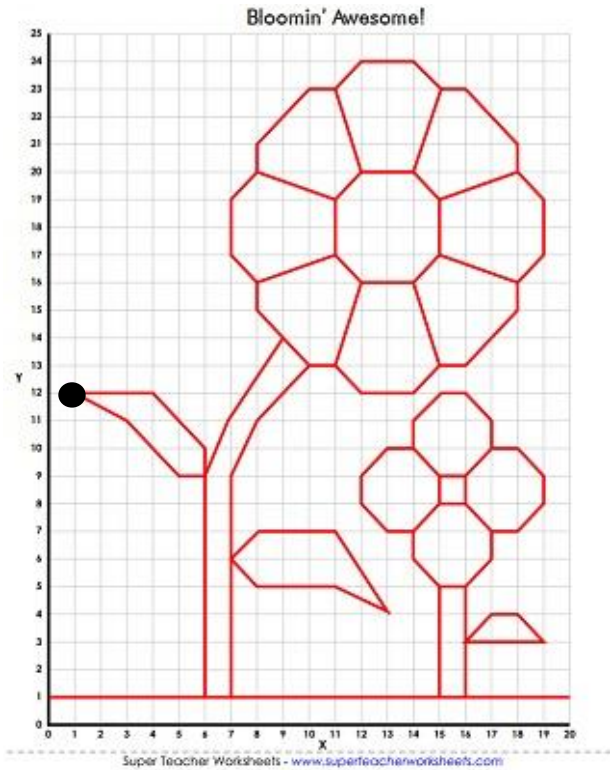A. Ray   B. Line   C. Segment   D. Angle   E. None of the above
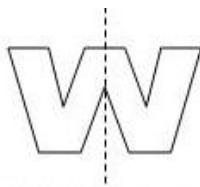
77. What type of angle is ∡COB in the diagram below?

A. Acute   B. Right   C. Obtuse
D. Straight   E.   None of the above

78. Name the point on the flower graph:

A.   (0, 12)
B.   (1, 12)
C.   (12, 0)
D.   (12, 1)
E None of the above

Bloomin' Awesome!

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79. Which geometric property is **NOT** shown in the letter W?

A. Slide
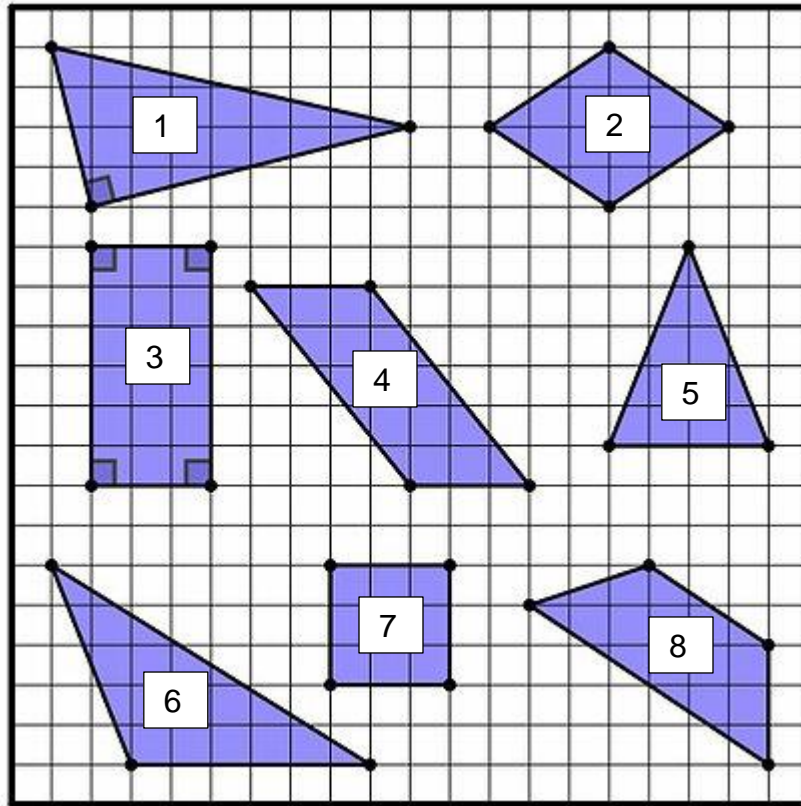B. Rotation
C. Line of Symmetry
D. Flip
E. None of the above

80.   How many centimeters are in a meter?

A. 10   B. 100   C. 1000   D. 1   E. None of the above

81. A quart is ¼ of a gallon. There are 4 cups in a quart. How many cups would
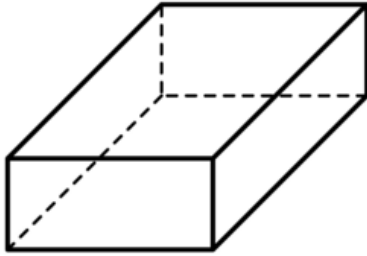be in a gallon?

A. 8   B. 12   C. 16   D. 24   E. None of the above

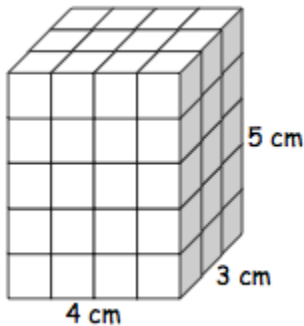**Use the diagram for problems #82-86.**

82. What is the perimeter of the square?

  A. 9 units   B. 4 units   C. 8 units   D. 12 units   E. None of the above

83. What is the area of rectangle in Figure 3?

  A. 36 units^2 B. 12 units^2 C. 18 units^2 D. 81 units^2 E. None of the above

84. Which figure is the right triangle?

  A. Fig 1   B. Fig 2   C. Fig 5   D. Fig 6   E. None of the above

85. Name all figures with at least one obtuse angle.

  A. 1,3,5   B. 1,4,6,8   C. 1,3,7   D. 2,4,6,8   E. None of the above

86. What is the height of the triangle in Figure 5?

  A. 4   B. 5   C. 6   D. 7   E. None of the above

87. How many vertices are there in a rectangular prism (box)?

A. 4   B. 6   C. 8   D. 12   E. None of the above

88. How many cubes does this rectangular solid have?

B. 72   B. 12   C. 51   D. 60   E. None of the above

5 cm

3 cm

4 cm

89. A mile has 5,280 feet. How many yards would that be?

A. 1760   B. 440   C. 2540   D. 528   E. None of the above

90. A baby may weigh 7 pounds 9 ounces at birth. How many ounces would that be?

A. 121 oz.   B. 65 oz.   C. 79 oz.   D. 63 oz.   E. None of the above