

1  
ROLL NO. \_\_\_\_\_

ARYABHATTA INTER-SCHOOL MATHS COMPETITION 2008-09

SUMMER FIELDS SCHOOL (JUNIOR)  
CLASS V

Time Allowed : 2 Hrs.

M.M. : 100

**GENERAL INSTRUCTIONS :**

1. Participant should not write his/her name on the questionnaire.
2. Write your Roll no. on all pages of the paper.
3. All questions are compulsory.
4. Read questions carefully, think twice before you write the answer.  
Another copy of the questionnaire will not be provided.
5. Marks are indicated at the end of each question.
6. Write the answer within the prescribed limited space.
7. Do your rough on a sheet pinned up with the questionnaire.
8. Use of eraser and overwriting is not allowed.

**PART - 1 : ARITHMETIC**

Q1. Put addition signs between digits of the number 9 8 7 6 5 4 3 2 1 to get a total of 99.

\_\_\_\_\_ = 99

(2)

Q2. There are 12 pencil boxes in a bag. 6 boxes have red pencils and 4 boxes have black pencils. 3 boxes have both. The number of boxes having no pencils is \_\_\_\_\_.

(2)

2

ROLL NO. \_\_\_\_\_

Q3. Circle the fraction closest to 0 from the following:

$$\frac{5}{12}, \frac{2}{3}, \frac{5}{4}, \frac{3}{4} \quad (2)$$

Q4. Two equivalent decimals for 2.4 are \_\_\_\_\_ and \_\_\_\_\_ . (2)

Q5. A decimeter is one thousandth part of a \_\_\_\_\_ . (2)

Q6. Fill in the box

3	5	7
11	13	19
17	23	

(2)

Q7.  $\frac{7}{25} > \underline{\hspace{2cm}} > \frac{6}{25}$  (2)

Q8. A train is moving at a speed of 92.4km/hr. Distance in metres covered by the train in 10min is \_\_\_\_\_ . (2)

Q9. Fill in the blanks to make the number divisible by 8 and 11.

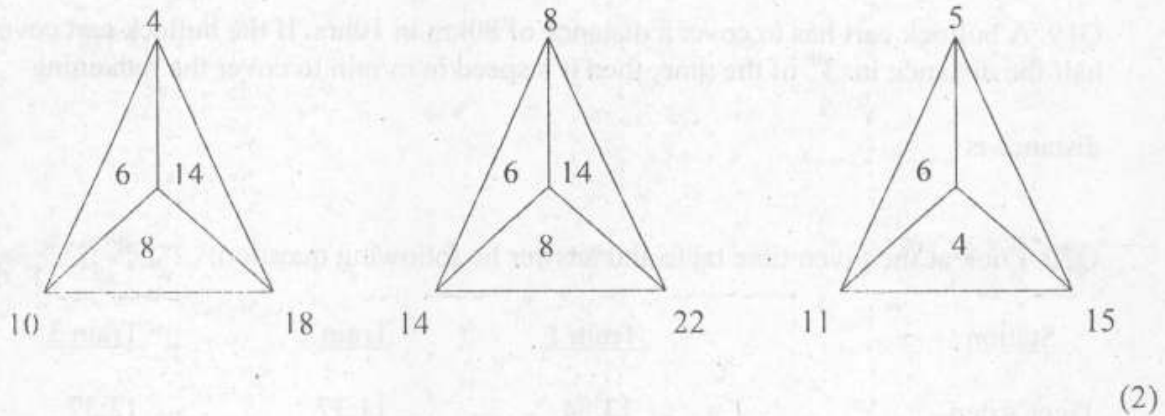
$$2 \quad 1 \quad \underline{\hspace{1cm}} \quad 9 \quad 5 \quad \underline{\hspace{1cm}} \quad 4 \quad (2)$$

Q10. 76 is a multiple of \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ . (2)

$$Q11. \frac{3}{4} = \frac{1}{2} + \frac{1}{6} + \frac{1}{\square} \quad (2)$$

Q12.  $1 \div [1 \div \{5 \div 4 - 1 \div (13 \div 3 - 1 \div 3)\}] =$  \_\_\_\_\_ (2)

Q13. Fill in the box



Q14. To boost the sale of a new chocolate, the manufacturer is packing gifts in the chocolate boxes. Every 15<sup>th</sup> box will contain a Spiderman mask and every 25<sup>th</sup> box will contain a Batman mask. 10000 new boxes of chocolates were shipped out to shops nationwide. The number of boxes that will contain both prizes is \_\_\_\_\_ (3)

Q15. At a Maths contest, 20 problems were given. Each correct answer earned 5 points and 2 points were deducted for each incorrect answer. Jai answered all the problems receiving a score of 72. The number of correct answers given by him was \_\_\_\_\_ (3)

Q16. Simplify :

$IX DCCCXLI.VI \div MMMDLXXV \div XXV \times LIV =$  \_\_\_\_\_ (3)

Q17. The average of runs scored by the eleven players of the cricket team is 60. If the runs scored by the captain are neglected, the average of runs scored by the remaining players increase by 5. The number of runs scored by the captain is \_\_\_\_\_ (3)

4

ROLL NO. \_\_\_\_\_

Q18. A fire fighter is standing on the middle step of a ladder. He moved up 9 steps. The smoke got worse so he moved back down 13 steps. When the smoke cleared, he went up 19 steps to the top. The number of steps the ladder has is \_\_\_\_\_ (3)

Q19. A bullock cart has to cover a distance of 80km in 10hrs. If the bullock cart covers half the distance in  $\frac{3}{5}$  of the time, then it's speed in m/min to cover the remaining distance is \_\_\_\_\_ (3)

Q20. Look at the given time table and answer the following question:

Station		Train 1	Train 2	Train 3
Tiger's den	a	13:54	11:37	12:37
	d	14:28	11:56	13:03
Fox lair	a	16:43	13:49	16:24
	d	17:08	14:00	17:06
Rabbit burrow	a	20:17	18:05	22:24
	d	20:48	18:34	23:02
Fury's nest	a	02:15	20:25	01:20

- a) Which is the fastest train between Tiger's den and Fury's nest? \_\_\_\_\_
- b) Which is the fastest train between Fox lair and Rabbit burrow? \_\_\_\_\_
- c) Which is the fastest train between Rabbit burrow and Fury's nest? \_\_\_\_\_
- d) Which train stops for the shortest possible time at each station in comparison to other two trains? \_\_\_\_\_ (4)

Q21. Riddhima went to the market and bought 24 pieces of fruit. She purchased 3 times as many oranges as bananas. On her way home, Riddhima accidentally dropped twice as many oranges as bananas. She still managed to bring home 15 pieces of fruit. The number of oranges she brought home were \_\_\_\_\_.

(3)

Q22. There are 36 students in Miss Geometry's math class.  $\frac{5}{6}$  of the students passed the test. The same number of boys and girls failed the test.  $\frac{4}{9}$  of the students are girls. The number of boys who passed the test is \_\_\_\_\_.

(3)

Q23. For his birthday, Rakshit got a bookshop's gift coupon worth Rs100. He bought a pen for Rs 9.99, pencils for Rs 14.99, 3 erasers for Rs 8.50 and a book for Rs 20.00. All items except the book were on 25% discount. The amount of money left with Rakshit is \_\_\_\_\_.

(3)

Q24. Mr. Baker used 1.5 cups of sugar to make a cake and half as much sugar to make the frosting. He wanted to make 6 such cakes but found that he was short of 1.75 cups of sugar. He had \_\_\_\_\_ cups of sugar.

(3)

PART 2 : GEOMETRY

Q1. If every vertex of a regular pentagon is connected to every other vertex, count the number of triangles formed. (Draw your diagram in the space provided)

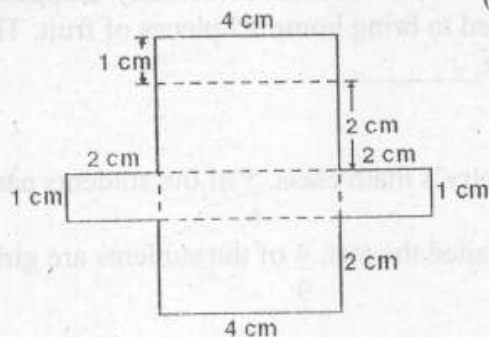
Number of triangles is \_\_\_\_\_.

(3)



Q2. Find the surface area of the box formed by the following figure :

(Dotted line represents a fold)



Surface area

(2)

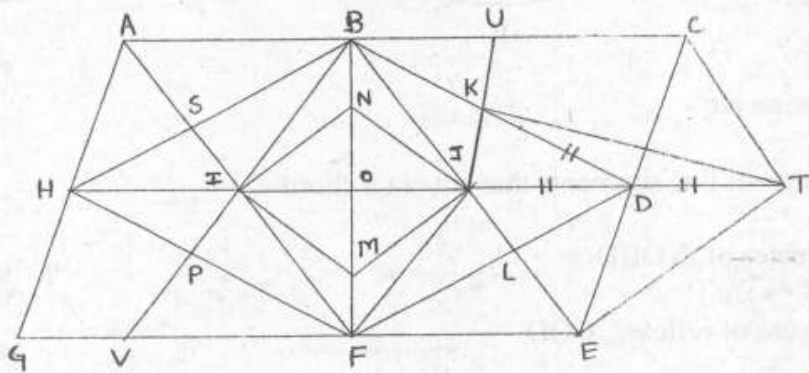
Q3. Fill in the blanks :

- The radius of a circle is 3.4cm. One end point of the line segment measuring 3.9cm lies on the centre and the other end point lies in the \_\_\_\_\_ of the circle.
- In a trapezium, the sum of each pair of angles between two parallel sides is \_\_\_\_\_.
- If one side of the triangle is produced, the exterior angle so formed is equal to the sum of the \_\_\_\_\_.
- The sum of measures of all angles of a parallelogram is \_\_\_\_\_.
- If A and B are two points on a circle, then the line segment AB is called a \_\_\_\_\_ of the circle.
- The unit used to measure the volume of air in a room is \_\_\_\_\_.
- The measure of the angle formed when the hands of the clock show the time as 01:30pm is \_\_\_\_\_.
- One of the angles of a triangle is twice the other. If one angle is  $60^\circ$ , then the other two angles are \_\_\_\_\_ and \_\_\_\_\_.
- Number of circles that can be drawn through 3 non collinear points is \_\_\_\_\_.
- \_\_\_\_\_ is the number of right angles formed by the hour hand of a clock in 12 hours.  
(10 x 1 = 10)

Q4. The measures of seven angles of an octagon are  $130^\circ, 124^\circ, 118^\circ, 165^\circ, 127^\circ, 149^\circ, 112^\circ$ . The measure of the eighth angle is \_\_\_\_\_ (2)

Q5. A piece of square paper has a perimeter of 32 centimetres. Rohan's dog tore off  $\frac{1}{4}$  of the paper. The area of the remaining paper is \_\_\_\_\_ (2)

Q6. Look at the figure given below and answer the following questions :

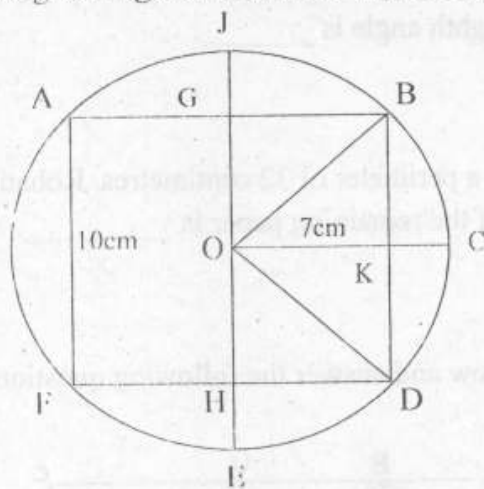


Name :

- a) A kite - \_\_\_\_\_
- b) A rhombus - \_\_\_\_\_
- c) A trapezium - \_\_\_\_\_
- d) A parallelogram - \_\_\_\_\_
- e) An obtuse angled triangle - \_\_\_\_\_
- f) A heptagon - \_\_\_\_\_
- g) An angle equal to  $\angle BJO =$  \_\_\_\_\_
- h) A linear pair of  $\angle FIO =$  \_\_\_\_\_
- i) Measure of  $\angle JKD =$  \_\_\_\_\_ ( given,  $\angle DKT = 25^\circ$  )
- j) Sum of angles of figure BSIJK - Sum of angles of figure BINJ = \_\_\_\_\_

(10 x 1 = 10)

Q7. Look at the given figure and answer the following questions :



- a) Name an arc - \_\_\_\_\_ (1)
- b) Number of line segments that are not a chord - \_\_\_\_\_ (1)
- c) Perimeter of  $\triangle OBD$  = \_\_\_\_\_ (2)
- d) Measure of reflex  $\angle COD$  = \_\_\_\_\_ (2)
- e) Measure of circumference = \_\_\_\_\_ (2)
- f) Measure of the circle = \_\_\_\_\_ (2)
- g) Shade a minor segment (1)