Summer Fields School
KAILASH COLONY, NEW DELHI-110048

Roll No.

- Please check that this questionnaire contains 8 printed pages.
- Please check that this questionnaire contains 24 questions in part 1 and 12 questions in part 2.

31st ARYABHATTA INTER-SCHOOL MATHS COMPETITION 2014

CLASS V

Time Allowed: 2Hrs.   Max.Marks : 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 work on a sheet pinned up with the questionnaire.

8. Overwriting is not allowed.

Q1. The smallest ten digit number that has two digits the same is _____. (2)

Q2. 15 hundreds multiplied by fifteen tenths multiplied by three fifteenths divided by forty five thousandths is equal to the successor of _____. (2)

Q3. The number of hours left today is half of the number of hours already passed. The time of the day now is _____. (2)

Q4. In a certain month there were 5 Saturdays. The dates of three Saturdays were even numbers. The day of the week on the 12th of this month was _____. (2)

Q5. Number of hundredths in 512.89 is _____. (2)

Q6. In a pencil box containing red and black pencils, 24% of the pencils were sharpened. Of the unsharpened pencils 0.5 were red and 76 were black. (2)
The total number of pencils in the box is _____.

Q7. Fill in the blanks with unlike fractions so as to make the equation true. (2)

_____ + _____ + _____ = 1

Q8. Two numbers with 2 decimal places become 16.8 and 4.9 respectively after rounding off to one decimal place. The largest possible sum of the numbers before rounding off is _____. (2)

Q9. During the end of the season sale, Priya bought a sweater at 35% discount at Rs780. The original price of the sweater was _____. (2)

Q10. Express 25dm as a fraction of 5hm in its simplest form _____. (2)

Q11. Mahi can paint $\frac{1}{8}$ of a saree in an hour. Nia can paint $\frac{1}{4}$ of the same saree in an hour. If they worked together, the time they will take to paint the same saree is _____. (2)

Q12. At India Gate, 7 children pay an equal amount to hire a boat. If one of the children who is scared of boating does not join the group, then each child has to pay Rs 5 extra. The cost of hiring the boat is _____. (2)

Q13. A container is $\frac{2}{3}$ rd full when $\frac{1}{6}$ th of the juice is used,805 ml of juice is left. The capacity of the container is _____. (2)

Q 14. Fill in the numbers 1-10 in each box so that the sum of the numbers in each square is24. (3)
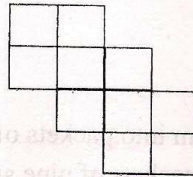
Q15. Mr. Baker has 98 chocolate cookies and 168 almond cookies. He wants to make gift boxes which have the same number of both kinds of cookies. (3)

The number of boxes that can be made is _____
The number of almond cookies in each box is _____.

Q16. The average height of Puneet, Rishi, Manish and Sameer is 1.62m. The total height of Puneet and Rishi is 48cm more than the total height of Sameer and Manish. If Sameer's height is 1.56m, then the height of Manish is _____. (3)

Q17. Write a 5 digit number divisible by 2, 4, 5, 8 and 9 both in Hindu Arabic numerals and Roman numerals. (3)

Hindu Arabic Numerals - ____ ____ ____ ____ ____
Roman Numerals - _____

Q18. Naman started his daily 8km jog at 06.40am. He ran at an average speed of 0.1km/min for the first 2km, the next 3Km he ran at an average speed of .02 Km / 20 sec. and he covered the remaining distance in 50mins. The time at which he completed the jog is _____. (3)

Q19. Mr. Shekhar earns Rs 4000 every month. He saves 30% of his earnings and spends the rest. In January, his earnings increased by 40% but he spent 30% more of what he had spent in the previous month. The percentage of earning he saved in the month of January is _____. (3)

Q20. Jai wants to place a photograph $11\frac{3}{4}$cm long in the centre of an album which is $29\frac{1}{4}$ cm in length. The distance of the photograph from each edge of the album is _____. (3)

Q21. Akhilesh saved $\frac{1}{4}$th of his pocket money and spent $\frac{1}{5}$th of the remainder on a book. He used the rest of the money to buy a pen and a photo frame. The cost of the photo frame is 3 times the pen. If the photo frame costs Rs510, then the cost of the book is _____.

(3)

Q22. Fill in the boxes to make a number which when divided by 11 leaves a remainder 9.

| 7 | 4 | 9 | 5 | | |

(3)

Q23. Dhruv had some sweets. If he packed them into packets of seven sweets he would have three sweets left. If he packed them into packets of nine sweets, he would be short of six sweets.

(3)

The least number of sweets that Dhruv had was _____ _____.

Q24. Look at the given Time-Table and answer the following questions:-

| STATION	ARRIVAL/ DEPARTURE	TRAIN 1	TRAIN 2	TRAIN 3
VENUS TOWN	a	0725	------	1240
	d	0735	1710	1245
MARS CITY	a	1040	1925	1510
	d	1042	1930	1525
JUPITER JUNGLE	a	1210	2217	1905
	d	1215	2225	1910
SATURN KINGDOM	a	1730	2350	2215
	d	------	2355	2220

a) The fastest train going to Saturn kingdom from Venus town _____.

b) The train that takes the shortest time from Mars city to Saturn kingdom_____.

c) The train that takes the shortest time to reach Jupiter jungle from Mars city_____.

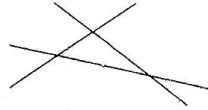d) The train that takes the longest time from Venus town to reach Jupiter jungle_____.

(4)

4

PART-II

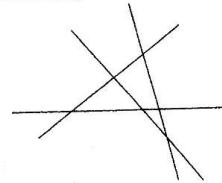**Note: The diagrams are not made to scale.**

Q1. Look at the figures given below and answer the following question:
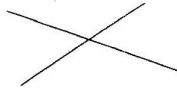
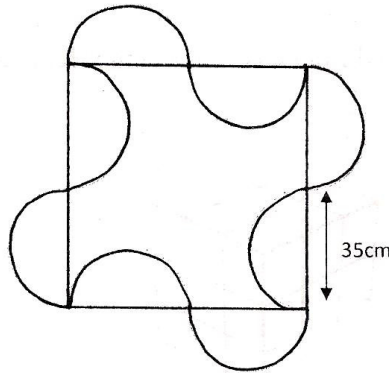2 lines; 1 intersection   3 lines; 3 intersections   4 lines; 6 intersections

The maximum number of intersections that can be made by 6 lines is _____.   (3)

Q2. The figure given below is made of 8 identical semicircles.

35cm

The perimeter of the given figure is _____.   (3)

Q3. The areas of two faces of a cuboid are 35cm^2 and 84cm^2 respectively. The volume of this cuboid is _____.   (3)

Q4. Prateek wants to cut a rectangle of size 8cm by 9cm into squares. The minimum number of squares he can get from this rectangle is _____.   (3)

Q5. Look at the given figure made with quadrilaterals of equal size having a perimeter of 42 cm. The perimeter of each quadrilateral is 18cm. Find the length of LM.
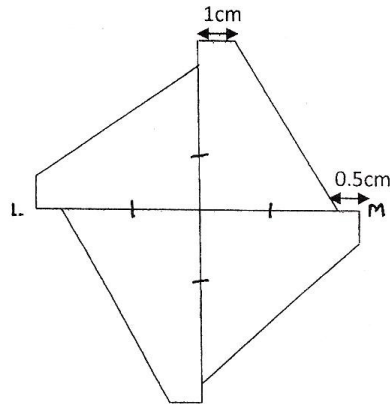
The length of LM is _____ .   (3)

Q6. Each corner cube is removed from this 3cm x 3cm x 3cm cube. The surface area of the remaining figure is _____ .   (3)
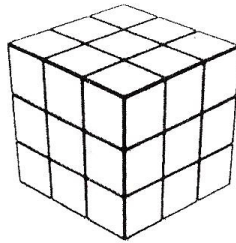
Q7. Number of different rectangles that can be formed by using 108 identical squares is

_____ .   (3)

Q8. A water tank is 18m long, 7m wide and 9m high. Water is released in this tank at a rate of $3m^3$ per minute. The height of water in the tank after 42mins will be _____ . (3)

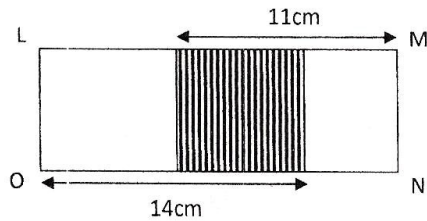Q9. Look at the given figure and answer the following questions:
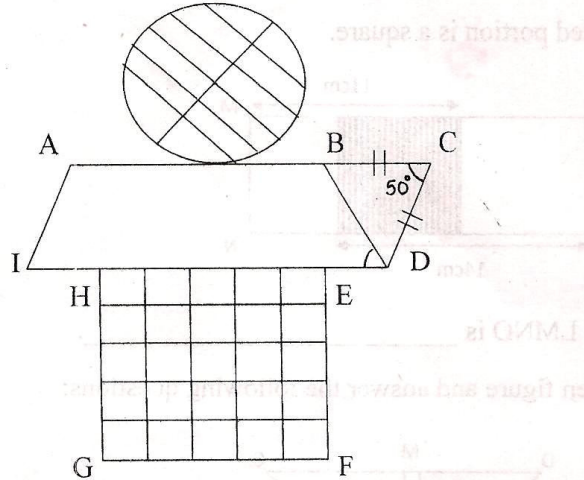
a) Number of chords = _____ (1)

b) Number of squares = _____ (2)

c) Measure of $\angle$ BDE = _____ (2)

d) Sum of all the angles of the polygon ACDEFGHI = _____ (1)

Q10. The pie chart given below shows the money saved by Mahi for the first five months.
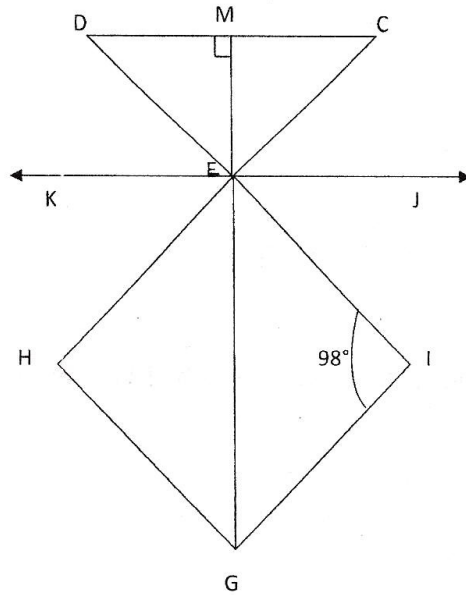Money saved by Mahi in May is _____. (3)

7
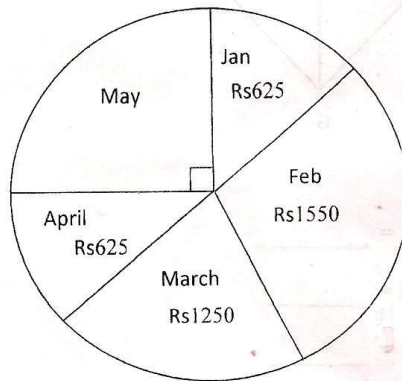
Q11. Look at the given rectangle LMNO and find its area. (3)

Given: The shaded portion is a square.

Area of rectangle LMNO is _____.

Q12. Look at the given figure and answer the following questions:

a)Measure of ∠HEG = _____ (1)

b)Measure of ∠MCE = _____ (1)

c)Measure of ∠DEK = _____ (1)

d)Measure of ∠EGI = _____ (1)