



Summer Fields School

KAILASH COLONY, NEW DELHI-110048

Roll No.										
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- Please check that this questionnaire contains 8 printed pages.
- Please check that this questionnaire contains 24 questions in part 1 and 11 questions in part 2.

40th ARYABHATTA INTER-SCHOOL MATHS COMPETITION 2023

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.*

Roll No. _____

PART – I

Q1 . The product of three consecutive odd numbers is 693 . The three odd numbers are _____ ,_and_. (2)

Q2. When 853853853 upto 100 digits is divided by 10001 . The remainder will be_. (2)

Q3. Fraction of a decade in a period of 5 centuries equals to _____. (2)

Q4. The product of numerator and denominator of a fraction is 21. If 2 is added to the numerator and 2 is subtracted from the denominator it becomes 1. The fraction is_. (2)

Q5. The percentage of numbers from 1 to 70 ,that have units digit as 1 to 9 are

_____ .
(2)

Q6. During a three day festival the number of visitors increases 3 times each day .If the festival ended on third day having 3105 visitors on last day .The number visitors attended the festival on First day are_____ . (2)

Q7. Every child in a class either swims or sings or both.Three fifths of the class swims and three fifths of sings.Five children swim and sing both.The number of students in the class are _____ (2)

Q8. Solve :

Six dozen + one dozen pairs = _____ sets of three (2)

Q9. Manan wants to bake 48 muffins for his birthday party. To bake 12 muffins , four eggs are needed. Eggs are sold in boxes where each box contains 4 eggs.The number of boxes of eggs Manan needs to buy_. (2)

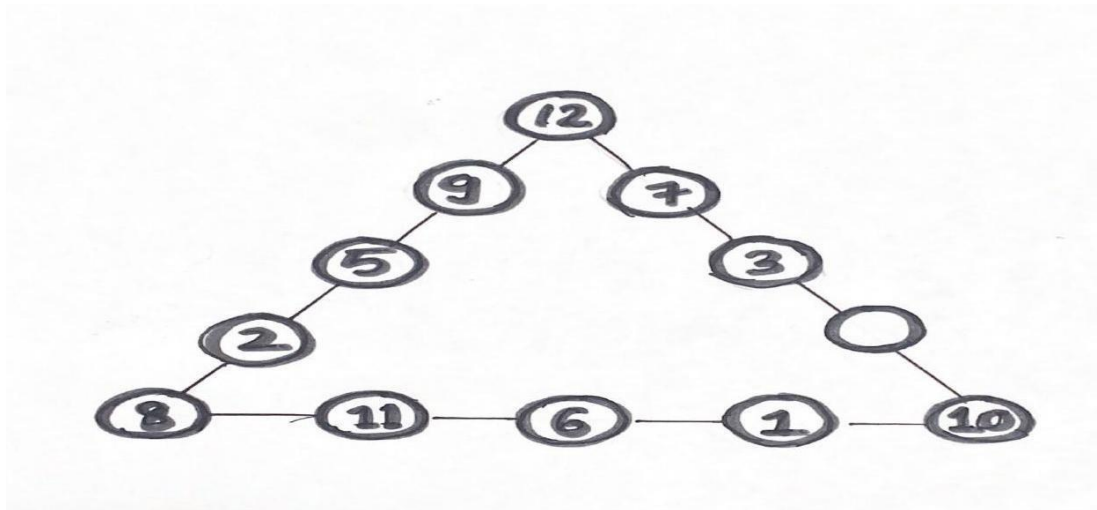
Q10. Puneet distributed some books among a group of children . If he gave 20 books to each child , he Will have 60 books left . If he give 27 books to each , he would have 4 books left . The number of children in group are_. (2)

Q11. When Gaurav increases its speed from 20km/hr to 25 km/hr , he takes one hour less than the usual time to cover a certain distance . The actual distance covered by him was _____. (2)

Roll No. _____

Q 12. Find the missing number :

(2)



Q 13. Fill in the boxes with the digits represented by A , B and C in the given question : (3)

$$\begin{array}{r} A \ B \ C \ x \\ \ 6 \\ \hline C \ C \ C \\ \hline \end{array}$$

Q14. Aman has 150 platinum, 180 gold and 420 silver coins. He places these three types of coins in a stack such that each stack has same number of coins of the same type. The number of stacks will be _____. (3)

Q15. The captain of a cricket team of 11 members is 26 years old and the wicket keeper is 3 years older. If the ages of these two are excluded, the average age of the remaining players is one year less than the average age of the whole team. The average of the team is _____. (3)

Q16. A motorbike leaves point X at 1 pm and moves towards point Y at a uniform speed . A car leaves Point Y at 2 pm and moves towards point X at a uniform speed which is double that of the Motorbike.They meet at 3:40 pm at a point which is 168 km away from X. The distance between X and Y is _____. (3)

Roll No. _____

Q17. Aman , Naman and Daman participated in a burger eating competition . Aman beat Daman by 18 burgers .Aman also beat Naman by eating 50% more burger than Naman .Also Naman had eaten 5% more burgers than Daman .The overall number of burgers that were eaten are _____ . (3)

Q 18. Four boys Ehaan , Farhan , Gary and Hamad blew some balloons. The number of balloons Ehaan blew is half of the number of balloons Farhan , Gary and Hamad blew. The number of balloons Farhan blew is one- third of the number of balloons Ehaan , Gary and Hamad blew .The number of balloons that Gary blew is one- fourth of the number of balloons Ehaan , Farhan and Hamad blew. If Hamad blew 65 balloons in all . The number of balloons Ehaan and Farhan blew all together are_ . (3)

Q19. Solve the following :

$$\text{MMDXLIX} + \text{CLI} \div \text{XXX} = \underline{\hspace{2cm}} \quad (3)$$

Q 20. . The profit earned by selling an article for Rs. 9000 is double the loss incurred when the same article is sold for Rs.4500. The price at which article is sold to make a profit of 25% will be_ . (3)

Q 21. Two boxes of clay can be used to make one toy car with some clay left over. The left overs of 12 boxes of clay can be used to make two toy cars without any clay left. The number of toy cars can be made from 48 boxes of clay are ____ . (3)

Q 22. Two furniture factories produce the same kind of beds and bed frames ,which are sold as a set. Factory A produces the beds and bed frames for 18 days and 12 days respectively. The number of sets produced by Factory A in 30 days are 432. Factory B produces beds for 13 days and bed frames for 17 days. It produces 442 sets of beds and bed frames in 30 days. If there is a joint venture of both factories ,then the maximum number of such sets they can produce are _____ .

(3)

Q 23. Jivansh and Devansh had Rs. 108 altogether. Jivansh spent 75% of his money and Devansh spent 80% of his money. As a result, the amount of their remaining money becomes the same. The money each of them have initially _____ .

(3) Roll No. _____

Q 24. Look at the given time -table and answer the following questions : (3)

(Note:- These are the timings of train reaching the stations)

	Train 1	Train 2	Train 3
Munich	1145	0925	0814
Augsburg	1205	0933	0830
Nurnberg	1230	0954	0853
Erfurt	1302	1022	0922
Leipzig	1323	1046	0944
Dresden	1416	1116	1019
Berlin	1447	1148	1047

a) James leave from Munich using train 1, how long will he take to reach Dresden?

b) Edwik has to go Berlin from Nurnberg. Which train he should choose to reach early?

c) Kelwin moves from Augsburg using Train 2 while Quint chose Train 3. Who will take lesser time to reach their destination i.e., Leipzig?

Roll No. _____

Part - II Geometry

Note - The diagram are not made to scale.

Q1) The different rectangles can be formed using 96 identical squares joined end to end are_ . (3)

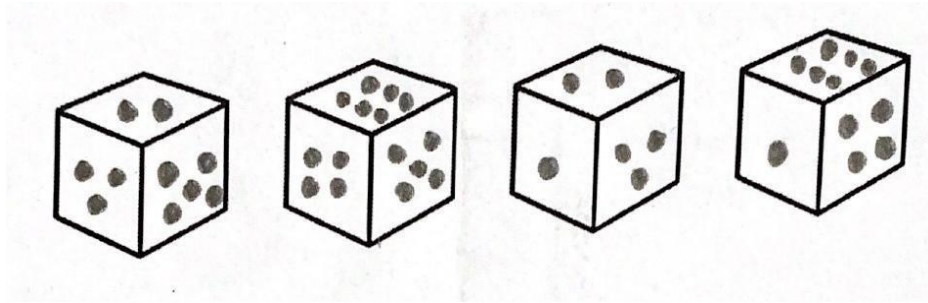
Q2) A clock is placed that 2:00 pm the minute hand point towards North West. In which direction does the hour hand will point at 6:00 pm _____ . (3)

Q3) A park is in the shape of a circle. A man crossed the park across the diameter AB. The percentage of the distance is saved by not walking along the circumference is _____.

(3)

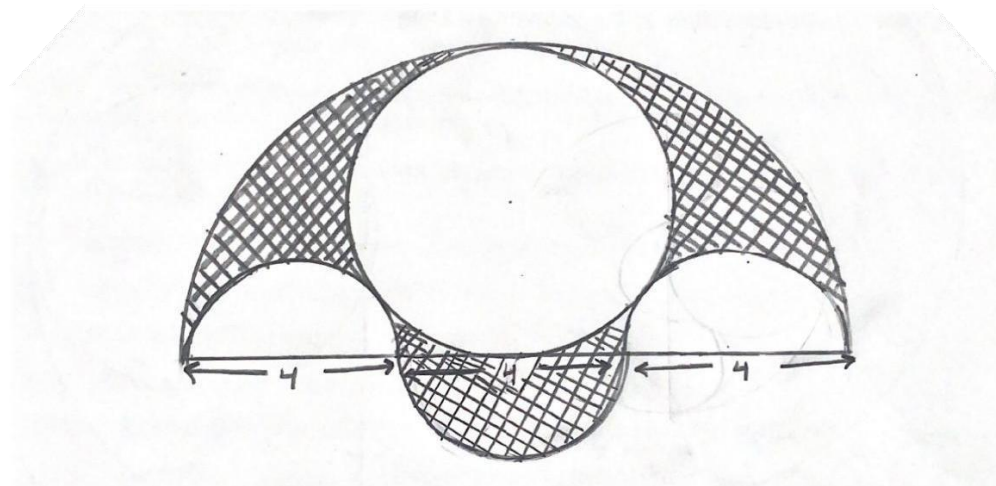
Q4) Which number will be on the opposite to the face which has 3 _____.

(3)



Q5) The area of the shaded region is _____

(3)



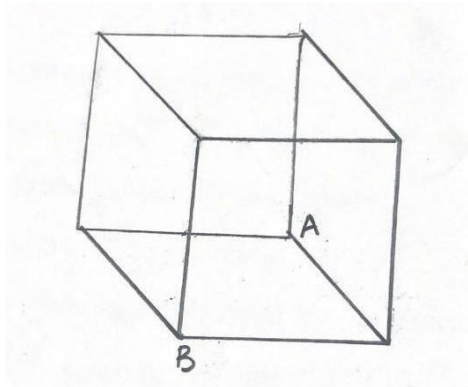
Roll No. _____

Q6) An empty rectangular bath tub 150cm long, 60cm wide and 50cm high is being filled with water from a tap at the rate of 30 litre per minute. The tap is turned off after 12 minutes. Water is then drained out of the tub at the rate of 18 litre per minute. The level of water in bath tub after 6 minutes _____.

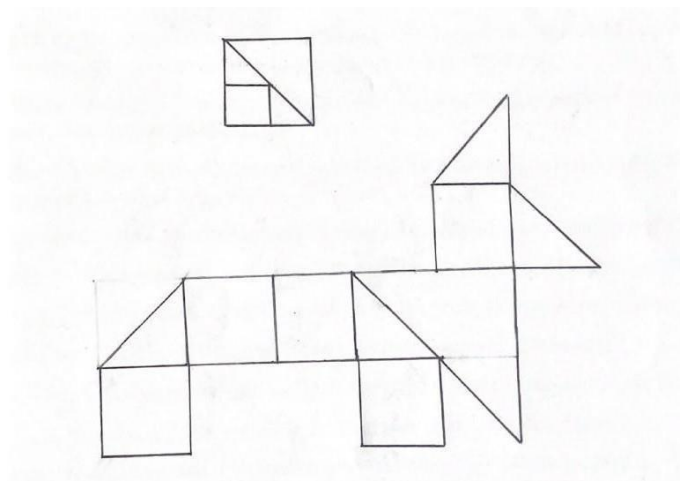
(3)

Q7) A fly is trapped inside a hollow cube. It moves from A to B along the edges of the cube, taking the shortest possible route. It then comes back to A, along the edges, taking the longest route (without going over any point more than once). If the total distance travelled 5040 m, the area of a face of the cube is _____.

(3)



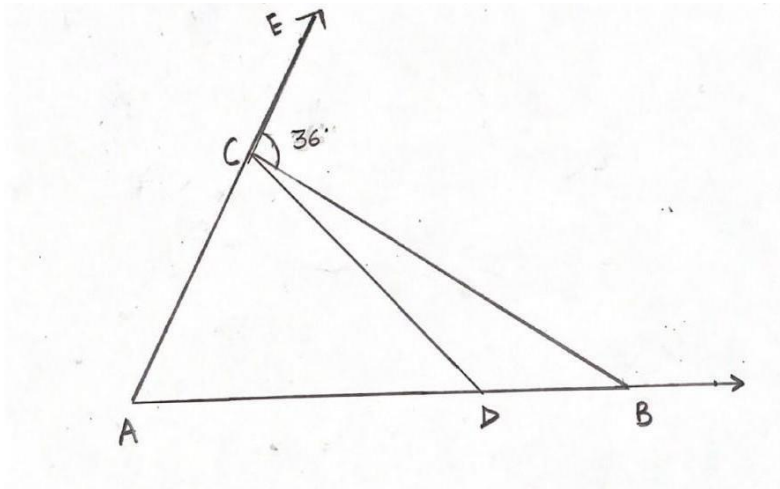
Q8) Tarun has several squares pieces, each piece of an area 6. He cut them into squares, triangles, rectangles in the manner shown in the diagram. She made a dog using these pieces as shown below. The area of the picture of dog formed _____. (3)



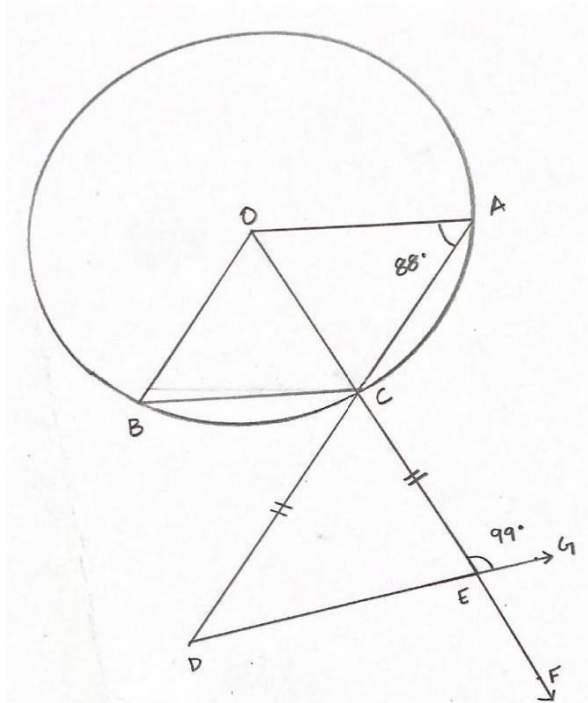
Q9) If the sum of the interior angles of a regular polygon measures 1980 the number of sides of the polygon are _____. (3) Roll No. _____

Q 10) In the figure (not drawn to scale) given below, if $AD = CD = BC$ and angle

$\angle BCE = 36^\circ$, the value of angle $\angle DBC$ is _____ (3)



Q11) Look at the figure and answer the following questions:



- a) Name a pair of supplementary angles- (1)
- b) Number of _____ chords- (1)
- _____ (1)
- c) Number of radii.- (1)
- d) Name a pair of parallel lines- (1)
- e) Name a linear pair- _____
- f) Measure of angle $\angle OCB$ - _____ (2)
- g) Measure of angle $\angle BCD$ - _____ (2)
- h) Name a pair of vertical angles- _____ (1)