ROLL NO _____

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 13 questions in part 2.

34th ARYABHATTA INTER-SCHOOL MATHS COMPETITION 2017

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 _____

Q1. The sum of two numbers is 484. One of the numbers ends in a zero. If this zero is removed, we get the second number. The numbers are _____ and _____. (2)

Q2. Manik had 108m of cloth. He used 0.1the cloth to make a quilt and 0.01 to make cushions. The amount of cloth left with him is _____cm. (2)

Q3. A number is decreased by a factor of 6 and the difference when increased by 28 results in 49. The smallest such number is _____. (2)

Q4. Priya is playing Clash Royale. If she had scored four times as many points as she did, she would have scored 15 more points. Her actual score was _____. (2)

Q5. 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 24, 27, 36, 48, 54 are the factors of three numbers. The LCM of these three numbers is _____. (2)

Q6. The number that gives the same result when multiplied by 1.5 and also when 1.5 is added to it is _____. (2)

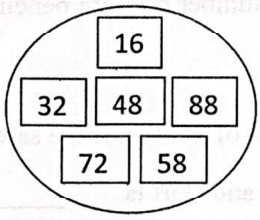
Q7. 24 athletes threw a shotput at a track and field event. If this was $\frac{15}{100}$ of all the athletes at the event, then the total number of athletes who competed at the event were_____. (2)

Q8. Naman and Savik start cycling on a 10km track at the same time. When Naman reaches the end of the track, Savik still has 2km left to finish. If Savik's cycling speed is 5km/hr, then Naman's cycling speed was _____. (2)

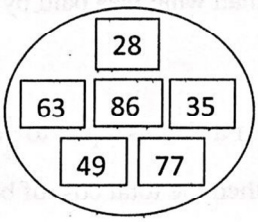
Q9. The coprime of 18 such that their LCM is 1746 is _____. (2)

ROLL NO _____

Q10.Look at the numbers given in the circles below and find the odd one out in each circle.



A



B

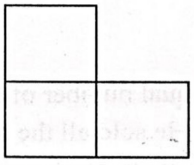
Circle A - _____ Circle B - _____ (2)

Q11. The average marks obtained by ten students in Aryabhatta Maths Competition is 470. All the students scored above 468 marks. The highest possible marks scored by a student in this group is _____. (2)

Q12. 3 years ago, Benu's mother was 3 times as old as Benu. After 8 years Benu will be 24 years old. Benu's mother will be twice her age in _____ years. (2)

Q13. Pihu dried some grapes. She realized that on drying, grapes lose 83% of their weight. The amount of fresh grapes needed to get 34kg of dried grapes is _____. (2)

Q14. Divide the given figure into 4 equal parts. (3)



Q15. A number is completely divisible by 7 but when it is divided by 2, 3, 4, 5 and 6 respectively, it leaves a remainder of 1. The smallest possible such a number is _____. (3)

Q16. There are 320 students in class V in a school, 40% of them are girls. The number of more girls the school must admit so that percentage of girls increases to 50% is _____. (3)

ROLL NO _____

Q17. Abeer paid ₹ 190 for 40 pencils and Dhruv also spent ₹ 190 for buying pencils but he paid $\frac{3}{5}$less than what was paid by Abeer. Number of more pencils Dhruv got was_____. (3)

Q18. 0.4 of the cost of a skirt is equal to $\frac{1}{4}$of the cost of a saree. If the saree costs ₹ 918 more than the skirt, then the total cost of both saree and skirt is _____. (3)

Q19. The average marks of Samaira, Sheena, Priya and Preeti are 892. Samaira and Preeti have same marks. Priya has 38 more marks than Preeti. Sheena has 48 more marks than Priya. The marks scored by Sheena are _____. (3)

Q20. Fill in the given magic rectangle with numbers from 1-24 such that

a) Sum of the numbers in each row is same.
b) Sum of the numbers in each column is the same.

(3)

Q21. Fill in the blanks with correct Roman numeral.

MMMCLXXXV ÷ _____ = XLIX (3)

Q22. A shopkeeper bought 9 boxes of toys each having an equal number of toys. The shopkeeper packed the toys into small boxes of 9 toys each. He sold all the toys after throwing 36 broken toys at a rate of ₹ 45/box and made ₹ 2610. The original number of toys in each box was _____. (3)

Q23. A submarine left a port and travelled towards the north at an average speed of 40 km/hr. The dragonship left the same port one hour later in the opposite direction at a speed of 50 km/hr. The number of hours the dragonship has to travel before the two are 400km apart is _____. (3)

ROLL NO _____

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

Station	Train A	Train B	Train C
Doraemon Town	a. -	a. 1426	a. 1018
	d. 0315	d. 1431	d. 1024
Pokemon City	a. 0535	a. 1747	a. 1414
	d. 0538	d. 1750	d. 1421
Pikachu Island	a. 0941	a. 2223	a. 1849
	d.0947	d. 2229	d. 1857
Nobita Port	a. 1226	a. 0149	a.2248
	d. 1232	d. 0155	d. -

a) The fastest train going from Doraemon Town to Nobita Port is_____.

b) Train that takes the longest time from Pokemon City to Nobita Port is_____.

c) The fastest train from Doraemon Town to Pikachu Island is _____.

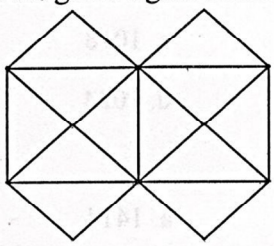
d) The train that takes the longest time for going to Nobita Port from Doraemon Town is_____. (4)

ROLL NO _____

Part II –Geometry

Note- The diagrams are not made to scale

Q1. Look at the given figure carefully and answer the following question.



The minimum number of lines needed to make this figure is _____. (2)

Q2. The largest possible length of a rectangle whose area is equal to the area of a square with a perimeter of 36cm is _____. (2)

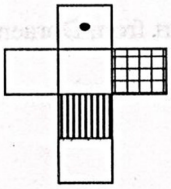
Q3. The difference between ∠X and ∠Y in the Δ XYZ is 68°. ∠Z is twice of ∠X.

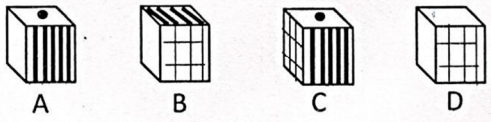
The dimensions of ∠X =_____, ∠Y = _____, ∠Z = _____. (2)

Q4. The distance between the centre and any point on the boundary of a circle with a perimeter of 833624mm is _____. (2)

Q5. The length and breadth of a rectangle are both prime numbers. If the perimeter of the rectangle is 80m, then its maximum possible area is _____. (3)

Q6. Choose the cube that is formed from the given net.

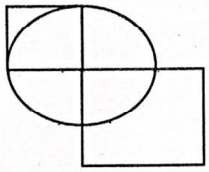




Cube formed from the given net is _____. (3)

ROLL NO _____

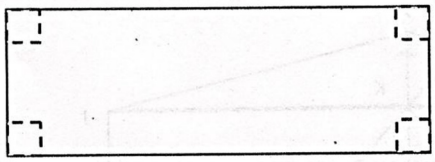
Q7. In the given figure, the circle intersects the bigger square exactly at the midpoint of its sides. The area of the bigger square is 49 sqcm.



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

Q8. If 1 cubic cm of water weighs 1gm and 1 cubic cm cube of synthetic wood weighs 0.33gm, then the difference of weight between 1 cubic m of water and 1 cubic m of synthetic wood is _____. (3)

Q9. A rectangular paper has a length and breadth of 18cm and 12cm respectively. Four corners in the shape of square are cut off.

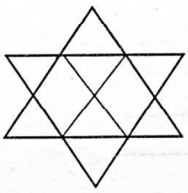


The remaining paper is folded into a box. The maximum possible volume of the box that can be made out of this paper is _____. (3)

Q10.The length and breadth of a rectangular tank is 90cm and $\frac{3}{5}$m. If 30 litres of water is poured in this tank, it fills $\frac{5}{9}$of the tank. The height of the tank is _____.

(3)

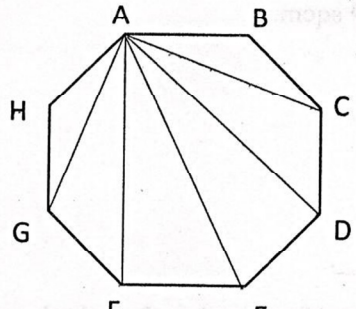
Q11. Look at the given figure carefully and count the number of parallelograms.



Number of parallelograms is _____. (3)

ROLL NO _____

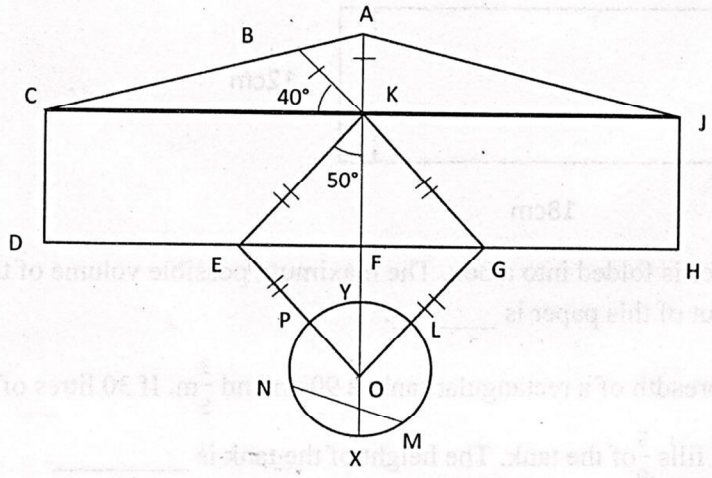
Q12. Look at the given figure and answer the following questions:



$\angle HAB + \angle BCD + \angle CDE + \angle DEF + \angle EFG + \angle FGH = 926°$

The sum of $\angle AHG$ and $\angle ABC$ = _____. (3)

Q13. Look at the below diagram and answer the following questions.



i. Measure of $\angle ABK$ = _____ (2)

ii. Measure of $\angle DEK$ = _____ (2)

iii. Measure of $\angle KGO$ = _____ (1)

iv. Name of a parallelogram = _____ (1)

v. Name of the largest chord = _____ (1)

vi. Shade a major segment (1)