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 12 questions in part 2.

33rd ARYABHATTA INTER-SCHOOL MATHS COMPETITION 2016

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.*

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Q1. The number that should be added to the smallest number formed by using the digits 1, 3, 6, 4, 2, 7 to get the sum as the greatest number formed by using the digits 2, 6, 7, 8, 9, 0 is _____. (2)

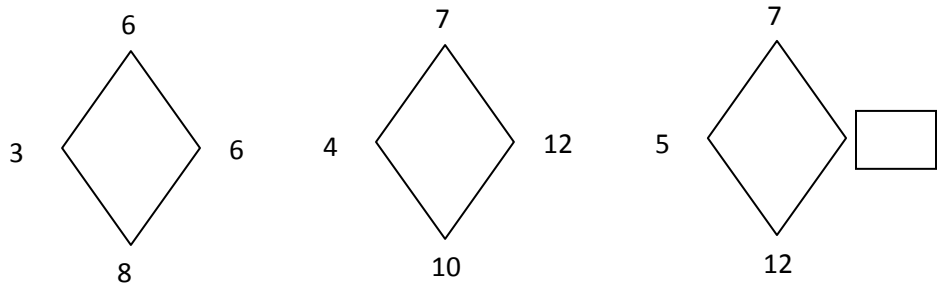
Q2. 500 thousand + 600 hundred + 320 tens = _____. (2)

Q3. A giant wheel has 48 passenger cabins. If cabin number 23 is on the top right now, then the number of the cabin at the bottom of the wheel is _____. (2)

Q4. The product of the digits of a three digit number is 288. The largest such a three digit number is _____. (2)

Q5. 23 thousandths less than four hundred thirty hundredths is _____. (2)

Q6. Look at the pattern below and fill in the box:



(2)

Q7. The length of a piece of cloth is 15m. It is cut into 6 pieces. The length of the largest piece is the same as the total length of the other 5 pieces. The length of the largest piece is _____. (2)

Q8. A muffler costs Rs 900 after a discount of 25%. The original price of the muffler is _____. (2)

Q9. There are 56 red and yellow balls in a bag. The number of red balls is six times the number of yellow balls. The number of yellow balls is _____. (2)

Q10. A ribbon is $\frac{11}{12}$m long. Number of pieces each $\frac{1}{6}$m long are cut from it. Length of the ribbon that is left rounded to the nearest tenth is _____. (2)

Q11. Radius town is halfway between Diameter town and Periphery town and in a line with them. Diameter town is located at a marker of 200 km and Radius Town is located at 155km. The mile marker of Periphery town is located at _____. (2)

Q12. A rabbit drank a magic potion and developed super powers. It can now double the distance with each successive hop. In its first hop it covers 1m, 2m in the second hop, 4m in the third hop, 8m in the fourth and so on. The number of hops it will take to go beyond 1km is _____. (2)

Q13. Fill in the blank with the correct Roman numeral.

XXXVII CCXIX ÷ _____ = CDIX (2)

Q14. Pihu won the grand prize in the Khelo and Jeeto contest. Her gifts will be delivered over 10 days. On first day, she gets a rabbit. On the second day, she gets two parrots and a rabbit. She gets three dolls, two parrots and a rabbiton the third day. This pattern continues for seven more days. She got chocolates, cards, flowers, kitchen set, pencil box, school bag and a barbie doll respectively. After 10 days the gifts she received most were ____ and ____ .
(3)

Q15. Fill in the boxes with suitable digits to make a five digit number which is exactly divisible by 2, 3, 4, 5, 6, 8, 9, 10, and 11. (3)

Q16. A jeweller used 2146 diamonds to make a necklace. He then used $\frac{4}{7}$ of the remaining diamonds to make a ring. If the jeweller had 27% of the original number of diamonds left, then the number of diamonds he had in the beginning were___. (3)

Q17. Mr. Pie left for the Maths land at 1100 hours. For the first two hours he drove at an average speed of 80 km/hr and covered $\frac{1}{3}$ of the journey and for the next two hours he drove at an average speed of 60 km/hr. If he wants to reach Maths land at 1724 hours then his average speed for the rest of the journey should be____. (3)

Q18. Nia, Mia and Shanaya gave some money for charity. They all had an equal sum of money left. Nia gave 0.65 of her money, Mia gave $\frac{2}{9}$ of her money and Shanaya gave Rs 1365. If they had a total of Rs 9849 left, then the amount of money the girls had in the beginning was _____. (3)

Q19. Look at the given Time – Table and answer the following questions:-

Station	Train A	Train B	Train C
Triangle Port	a. 1525	a. -	a. 1040
	d. 1527	d. 0935	d. 1051
Quadri City	a. 1855	a. 1145	a. 1431
	d. 1910	d. 1150	d. 1443
Penta Town	a. 2314	a. 1355	a. 1909
	d.2325	d. 1359	d. 1915
Hexa Square	a. 0437	a. 1605	a.0115
	d. 0453	d. 1607	d. -

a) The fastest train going to Penta town from Triangle Port is_____.

b) Train that takes the longest time from Quadri City to Hexa Square is_____.

c) The fastest train from Triangle Port to Hexa Square is _____.

d) The train that takes the longest time for going to Penta Town from Quadri City is_____. (4)

Q20. Manan has a box of chocolates which is 80% full. He ate some chocolates and only 35% of the chocolates were left. When he put 18 chocolates in the box, it became full. The total number of chocolates in the full box is _____. (3)

Q21. The present average age of 10 men is same as it was 4yrs ago. One of the men has been replaced by a younger man. The new man is younger by _____ years. (3)

Q22. Sahil spent $\frac{5}{9}$ of his pocket money on a book and gave $\frac{1}{4}$ of the remainder to his brother. He spent rest of the money on 4 pens at Rs 45 each. The money he had in the beginning was _____. (3)

Q23. A florist has some flowers when he groups them in 2, the remainder is 1. If he groups them in 3, the remainder is 2. Remainder is 3 when he groups them in 4. The remainder is 4 and 5 respectively when he counts them in groups of 5 and 6. The number of flowers is_____. (3)

Q24. 24 numbers can be formed using the digits 4, 6, 5 and 8 where each digit is used only once. The sum of all the digits of these 24 numbers is _____. (3)

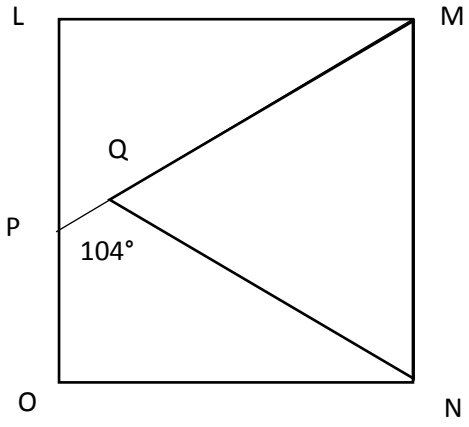
Part II –Geometry

Note- The diagrams are not made to scale

Q1. Devanshu and Devna both start walking from the same place. Devanshu went 2km west, 1km north, 2km west, 3km south. Devna went 2km east, 2km south, 4km west. The distance and the direction which Devna has to take to reach the same point as Devanshu is _____. (2)

Q2. Look at the given figure and answer the following question.

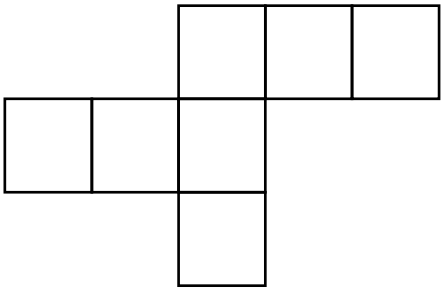
Given LMNO is a square and QM = QN



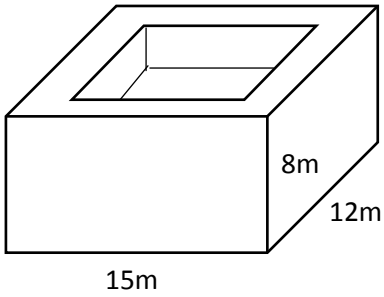
The measure of ∠QNO = _____. (2)

Q3. Nine poles are erected on each side of the boundary of a square field. The distance between each pole is 80m. The perimeter of this field is _____km. (2)

Q4. Samaira wants to make a cube out of the following net but the net cannot be folded into a cube as it has an extra square. Shade the square in the given net that has to be removed so that it can be folded into a cube. (2)



Q5. One metre cubical blocks are needed to make an open rectangular tank which has the floor and four walls one metre thick. The dimensions of the tank are given below:



The number of cubical blocks needed are _____. (3)

Q6. It takes 8mins to fill an empty rectangular tank with water flowing from a tap at a rate of 10 litres per minute. The tank is 80cm long and 50cm wide and contains four metal cubes each with an edge of 10cm. The height of this tank is _____. (3)

Q7. The perimeter of a rectangle and a square is 320m each. The area of the rectangle is 25% less than that of the square. The measure of the length of the rectangle is _____. (3)

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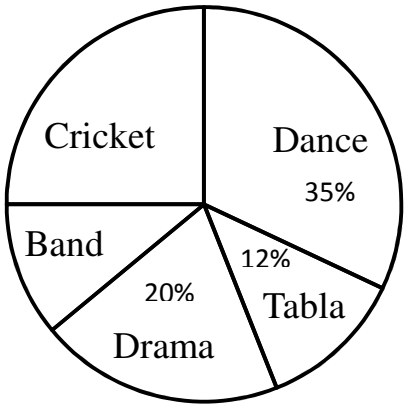
Q8. Look at the given figure made up of 5 identical rectangles and calculate its area.

The area of the figure is _____. (3)

Q9. For a Maths Lab activity, square sheets of two different sizes are neede. If the perimeter of the larger sheet is nine times the smaller sheet, then the number of smaller sheets needed to cover the larger sheet is _____.

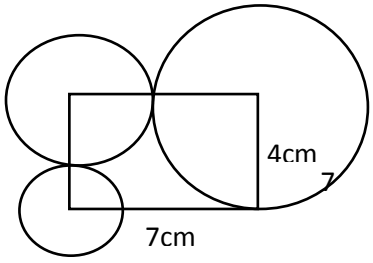
(3)

Q10. This pie chart represents the students involved in different activities in a school.



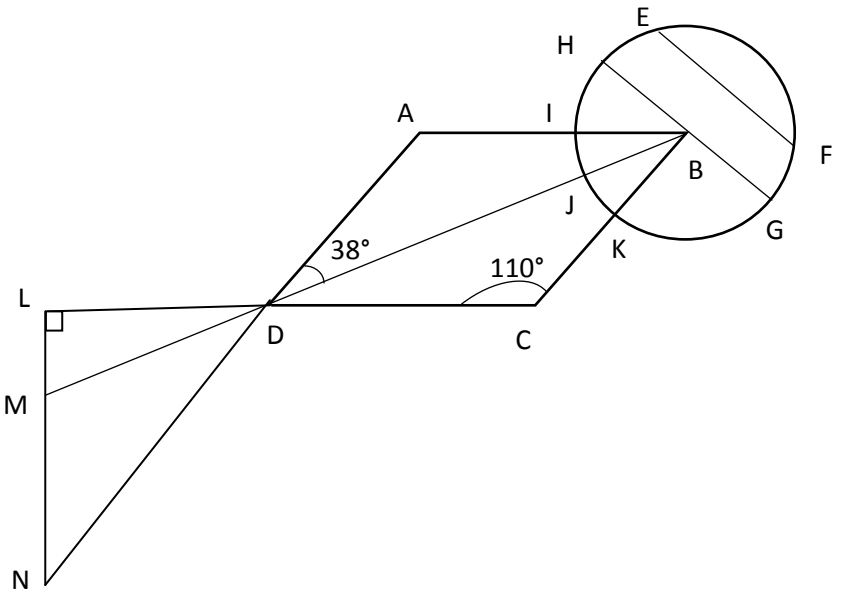
If there are 374 students in the band, then the total number of students in the school is _____. (3)

Q11. Look at the given figure and answer the following question.



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

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



Given ABCD is a parallelogram.

a. An angle adjacent to $\angle$CDN is _____ (1)
b. A linear pair of $\angle$MDN is _____ (1)
c. Measure of $\angle$CDN is _____ (2)
d. Measure of $\angle$LMD is _____ (2)
e. LN $\perp$ _____ (1)
f. DC $\parallel$ _____ (1)
g. Supplement of $\angle$BDC = $\angle$_____ (1)
h. Number of radii = _____ (1)
i. Shade a major segment (1)