

ROLL NO _____



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 13 questions in part 2.

32nd ARYABHATTA INTER-SCHOOL MATHS COMPETITION 2015

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 the 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. Number of thousandths in 2 tenths is _____. (2)

Q2. To get 0.9, 99 should be divided by _____. (2)

Q3. Fill in the blanks to complete the following pattern

_____, 21160, 21020, 21120, _____ (2)

Q4. Sumit bought a book which has 420 pages. The number of digits used for printing its pages are _____. (2)

Q5. 40% of the sum of half of 0.07 and 0.5% of 0.0064 is _____. (2)

Q6. The remainder is 3 when $8 \square 5425$ is divided by 11. The value of the number in the box is _____. (2)

Q7. Fill in the blank so as to make the last 4 digits of the product as zeros.

$165 \times 285 \times 125 \times \underline{\hspace{2cm}}$ (2)

Q8. At a party, the number of ladies is twice the number of men. The average age of men is 32yrs and the average age of women is 31yrs. The average age of the men and women together is _____. (2)

Q9. Raman and Gagan mowed $\frac{5}{12}$ of their garden. If Raman mowed $\frac{1}{3}$ of the garden, then the fraction of the garden mowed by Gagan is _____. (2)

Q10. The product of two co-primes is 210. Their L.C.M is _____. (2)

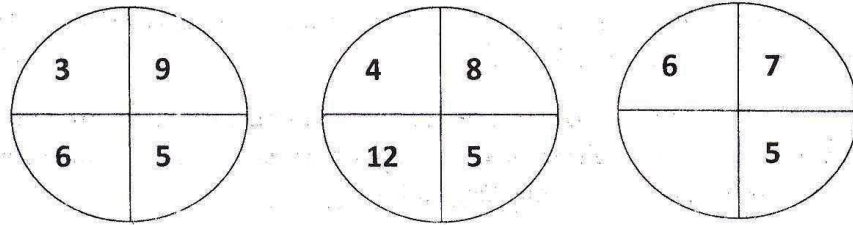
Q11. There are 2 clocks in Mahi's room. One of them is 29 minutes behind. The second one is 16 minutes ahead. If the time showing now in the first watch is 09:50, then the time showing now in the second watch is _____. (2)

Q12. $3\frac{3}{4} \times \frac{1}{2} = \underline{\hspace{2cm}} \times \frac{1}{2} + \frac{3}{4} \times \frac{1}{2}$ (2)

Q13. Fill in the blank with a Roman number so as to make this mathematical equation true

$\underline{\hspace{2cm}} \div \text{XLIX} = \text{LXI}$ (2)

Q14. Look at the following pattern and fill in the missing number: (3)



Q15. Use digits 0 to 9 without repeating any digit to make a fraction equal to each of the fractions given below:

$$\frac{1}{12} = \frac{\quad}{\quad}, \quad \frac{1}{8} = \frac{\quad}{\quad}, \quad \frac{1}{6} = \frac{\quad}{\quad}, \quad \frac{1}{3} = \frac{\quad}{\quad} \quad (3)$$

Q16. During X-mas sale, a shop gifted a scarf to every 4th customer, a hanky to every 6th customer, a pouch to every 9th customer, a pack of clips to every 12th customer. Anu was in the queue with at least 75 people in front of her. She got all the gifts. Her position in the queue was _____ (3)

Q17. The cost of 3 similar pencils and 5 similar pens is Rs 148. The cost of 6 such pencils and 5 such pens is Rs 196. Saumya bought 12 pens and got 30% off. The amount paid by her is _____. (3)

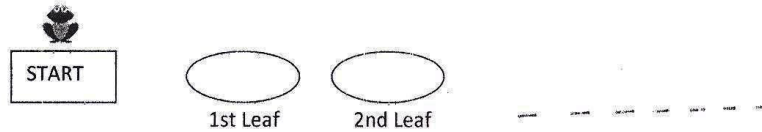
Q18. Samaira spends $\frac{2}{5}$ of her pocket money to buy chocolates and gives $\frac{1}{9}$ of the remaining money to her sister. She spends $\frac{3}{4}$ of the rest of the money to buy a book and saves rest of it. The fraction of money saved by her is _____. (3)

Q19. There were 86 sailors on four boats. At a given point of time 7 sailors jumped from the first boat, 9 from the second, 6 from the third and 4 from the fourth boat. Same number of sailors were left on each boat. The number of sailors on the third boat the beginning was _____. (3)

Q20. Mr. Kapoor travelled to Agra which was 175km from his house at a speed of 75km/hr. He stayed there for 2 hours. It took him 2 hours more on his return journey. If he reached his house at 5pm, then the time at which he left his house for Agra in the morning is _____. (3)

Q21. A big bottle of oil contained 5.47l of oil. Some of the oil was poured into 6 smaller bottles equally. 0.99l more oil was left in the big bottle than a smaller bottle. The quantity of oil poured out of the big bottle is _____ (3)

Q22. A frog is jumping on lotus leaves growing in a straight line. The frog can make only two kinds of jumps, either three forward or four backwards. The minimum number of jumps it will make to reach the 22nd leaf is _____ (3)



Q23. The sum of any 2 prime numbers is always an even number but the sum of this set of 9 consecutive prime numbers is also an even number. The sum of these numbers is _____ (3)

Q24. Look at the Time table given below and answer the following questions:

STATION		TRAIN 1	TRAIN 2	TRAIN 3
BATMAN CITY	a	2145	0735	
	d	2150	0736	2350
SPIDERMAN ESTATE	a	0135	1047	0825
	d	0137	1052	0830
SUPERMAN TOWN	a	0529	1630	1210
	d	0531	1640	1212
IRONMAN LAKE	a	1747	2146	1835
	d	1748		1841

a) The train that takes the shortest time from Spiderman Estate to Superman Town.

b) The fastest train going to Superman Town from Batman city. _____

c) The train that takes the longest time from Spiderman Estate to Ironman Lake. _____

d) The train that takes the longest time from Batman city to Ironman Lake. _____

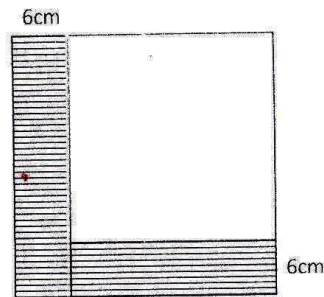
(4)

Part II - Geometry

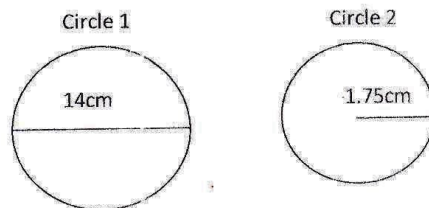
Q1. Ajay was facing East. He made a half turn in the clockwise direction. Then he made a 135° turn clockwise. The direction he is facing after making the turns is _____ (2)

Q2. The total length of the edges of a cube is 58.8cm. Its total surface area is _____ (2)

Q3. Two sides of a square are increased by 6cm resulting in an increase in area represented by the shaded region. If the area of the increased region is 216 sq.cm, then the area of the original square is _____ (3)



Q4. Ant A goes around circle 1 and ant B goes around circle 2 a number of times. The difference between the distance covered by the two ants after each ant completes 25 revolutions of their respective circle is _____ (3)

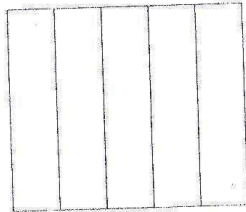


Q5. A tank with a base of 12m by 14m is filled with water to the brim. The tank can hold 7560 litres of water when full. The height of this tank is _____ (3)

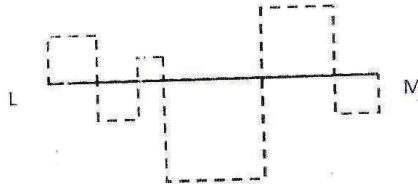
Q6. A cuboid has a volume of 36cu.cm . 20 such cuboids have been placed in a box which has a height of 4cm . The maximum possible length of this box is _____ (3)

Note: All the dimensions are whole numbers.

Q7. Look at the given square made up of 5 identical rectangles. The perimeter of each rectangle is 36cm . The area of the square is _____ (3)



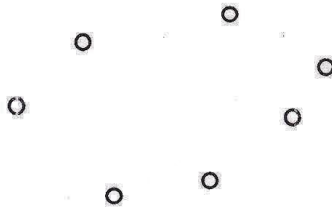
Q8. Length of wire LM is 32cm . Another length of wire represented by dotted lines intersects wire LM to form squares. The length of the wire shown with dotted lines is _____ (3)



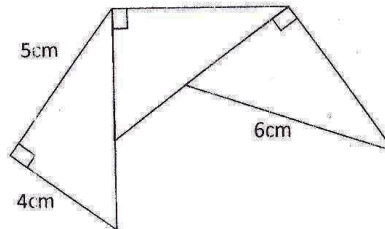
Q9. Abir made the smallest possible square with rectangular cards each measuring 8cm by 6cm . The number of cards he used in making the square is _____ (3)

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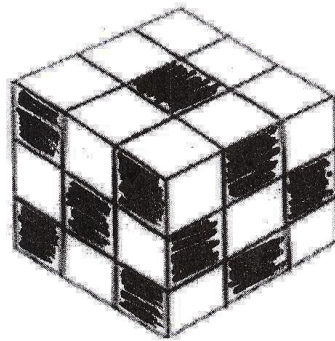
Q10. Look at the given figure and note that no 3 points are collinear points. The maximum number of triangles that can be formed by using any 3 points is _____. (3)



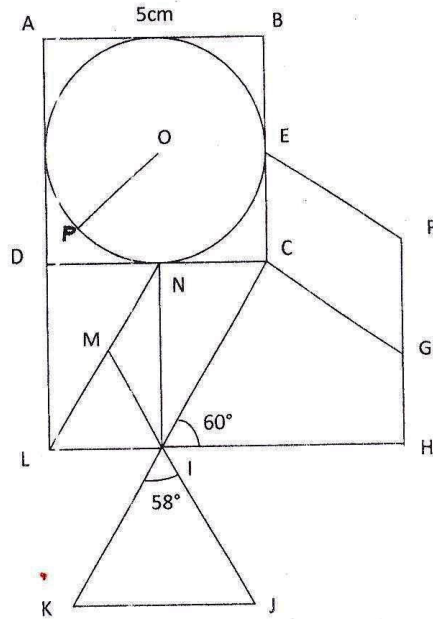
Q11. The figure given below is made up of three identical triangles. The perimeter of the figure is _____. (3)



Q12. Look at the given cube made up of 27 identical size smaller cubes. For each face of the large cube, the opposite face is shaded the same way. The total number of smaller cubes that must have atleast one face shaded is _____. (3)



Q13. Look at the given figure and answer the following questions:



- Measure of \overline{OP} = _____ (2)
- Sum of the angles of the polygon ABEFGCD = _____ (1)
- Linear pair of $\angle CIH$ is _____ (1)
- Measure of $\angle MIN$ = _____ (1)
- Measure of $\angle NCI$ = _____ (1)