

Modern School
Vasant Vihar

Ramanujan Society of Born Mathematicians (Jr.)
Inter School Mathematics Competition

Sample Paper Grade V

Max. Time: 2 hrs

Max. Marks: 100

Instructions:

1. Please write your name and roll number carefully and clearly, on the question paper and answer sheet.
2. Read the questions carefully. Do the rough work on the last two blank sheets.
3. Think before you mark/write the answer. Mark/write the answer at the correct place and within the limited space provided **using a pencil.**
4. There is no negative marking.
5. The question paper has:
 - Part I** - Q.1 to 50 Pg. No. 1 to 12 (green Pages)
 - Part II** - Q.1 to 13 Pg. No. 12 to 15
 - Part III** - Q.1 to 6 Pg. No. 16 to 18

PART – I

Max Mark (1x50=50)

1. For Question 1 to 50 decide the correct answer from the choices given. Darken/shade your choice on the **separate answer sheet** provided, **with a pencil** as shown below in the correct method.

Correct Method

	a	b	c	d
1	●	○	○	○
2	○	●	○	○
3	○	○	●	○
4	○	○	○	●

Wrong Method-No Marks

	a	b	c	d
1	●	○	●	○
2	○	●	●	○
3	○	○	○	○
4	●	●	●	●

2. **Follow the Correct Method.** There is only one correct answer for each question. Answers having **more than one circle shaded or no circle shaded will not be given marks**

1. If yesterday had been Wednesday's tomorrow and tomorrow is Sunday's yesterday, what day would today be?

- a) Wednesday
- b) Thursday
- c) Friday
- d) Saturday

2. LCM of two numbers is 504. Which cannot be the HCF?

- a) 10
- b) 18
- c) 36
- d) 42

3. The scores of 19 students averaged 80. If the score of the 20th student is counted, the average score is 82. What is the score of the last student?

- a) 120
- b) 157
- c) 164
- d) 70

4. What is the difference between the (sum of third multiple of 18 and the sixth multiple of 12) and sum of factors of 24?

- a) 66
- b) 126
- c) 176
- d) 186

5. Among a group of children $\frac{2}{3}$ of a pie was shared. Each child received $\frac{1}{12}$ of the pie. How many children were there in the group?

- a) $\frac{1}{18}$
- b) $\frac{1}{9}$
- c) 8
- d) 9

6. A water tank is 15 m long, 12m wide and 1.4 m deep. It has water up to a height of 60 cm. how many more cubic meters of water can be added in the tank?

a) 108

c) 252

b) 144

d) 1080

7. How many multiples of 4 are there between 12 and 96, inclusive?

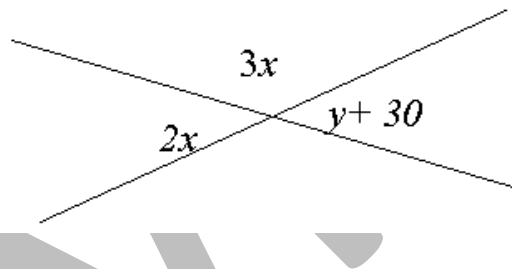
a) 21

c) 23

b) 22

d) 24

8. In the figure the value of y is = ?



a) 36

c) 72

b) 42

d) 102

9. A football team won 4 more matches than it lost. If it won $\frac{3}{5}$ of its matches how many matches did it play?

a) 16

c) 28

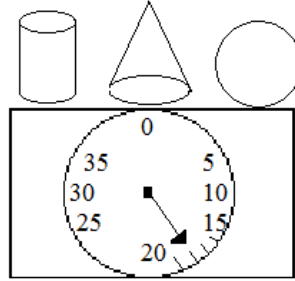
b) 20

d) 32

b) 2

d) 4

19. The total weight of 3 objects is shown in the figure. The cone is 1 kg heavier than the ball. The ball is 1 kg heavier than the cylinder. What is the weight of the cone?



a) 5 g

c) 7 kg

b) 6 kg

d) 8 kg

20. The cost of brown picture frame is ₹ 193.75 less than 3 times the cost of white picture frame. If the cost of brown frame is ₹ 499.25, what is the cost of white frame?

a) ₹ 82.00

c) ₹ 231.00

b) ₹ 581.25

d) ₹ 305.50

21. Lalita takes 2 minutes 30 seconds to finish reading of one page of a storybook. If the book has 66 pages, how long will she take to finish reading it?

a) 9900 minutes

c) 2 hours 75 minutes

b) 2 hours 45 minutes

d) 16 hours 5 minutes

22. Garima is XIII years old. Her sister is X years old. How old will they be when their total age is LV years?

a) XX, XXIII

c) XXV, XXII

b) XIX, XXII

d) XXIX, XXVI

23. Rahul is going on vacation. He is packing a jacket and snow goggles. He is going to which city where he needs them?

- a) City A 27.6°F c) City C 72.6°F
 b) City B 27.6°C d) City D 72.6°C

24. Rohit's car was parked in the parking from 1:30 pm to 5:25 pm. How much does he have to pay?

Parking Rates	
First Hour	` 12.50
Every additional half an hour or part thereof	` 5.75

- a) ` 23.00 c) ` 47.00
 b) ` 29.75 d) ` 50.00

25. Saurabh can make 7 clay toys in a day. How many weeks will he take to finish 1715 suck toys?

- a) 33 c) 35
 b) 34 d) 240

26. Tickets for all but 100 seats in a 10,000-seat auditorium were sold. Of the tickets sold, 20 percent were sold at half price and the remaining tickets were sold at the full price of ` 2.00. What was the total amount of money from the ticket sales?

- a) ` 15,840 c) ` 18,000
 b) ` 17,820 d) ` 19,800

27. How many minutes does it take to travel 120 miles at 400 miles per hour?

- a) $\frac{31}{3}$ c) 12
b) $\frac{82}{3}$ d) 18

28. I divided the number by 52. If the quotient was 47 and the remainder was 47, the number I divided was?

- a) 2261 c) 2491
b) 2397 d) 2751

29. Arav is 26 years younger than his father. His father's age will be 3 times his age in 4 years. How old is Arav?

- a) 6 c) 13
b) 9 d) 27

30. What is the sum of the smallest odd number that has only 3 factors and the smallest two-digit number that has only 3 factors?

- a) 15 c) 34
b) 19 d) 90

31. A dance group collected exactly ₹ 599 from its members to register in Dance Delhi Dance Competition. If each member contributed at least ₹ 12, what is the greatest number of members the club should have?

- a) 43 c) 49
b) 44 d) 50

32. A mason lays square tiles on a wall 8 meters by 12 meters. Find the largest size of square tile that can be fit in the wall without cutting a whole tile.

- a) 1 sq meter c) 8 sq meter
b) 4 sq meter d) 12 sq meter

33. I am a 4-digit number. I have the biggest single digit in my thousands place and all my other digits have the same place-value. What am I?

- a) 9000 c) 9111
b) 9090 d) 9999

34. A total of 537 digits are printed on the number tags given to each participant of a cross country race. The numbers on the tags are in order starting from 1. What is the total number of participants?

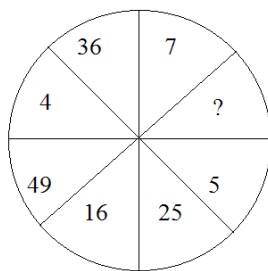
- a) 215 c) 348
b) 305 d) 909

35. In Indus School, 40 more than $\frac{1}{3}$ of all the students are taking a Science course

and $\frac{1}{4}$ of those taking a Science course are taking Mathematics. If $\frac{1}{8}$ of all the students in the school are taking Mathematics, how many students are in the school?

- a) 240 c) 480
b) 300 d) 720

36. How is the question mark worth?



- a) 2
b) 6
c) 8
d) 64

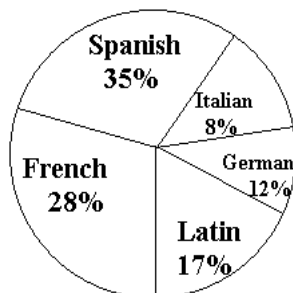
37. What is the sum of LXXXVI and XI?

- a) XCIII
b) XCVII
c) DCCLVI
d) CMXLVI

38. This year Mr. Singh's age is a multiple of 7. Next Year, his age will be a multiple of 5. If his age is between 20 and 80 years, how old would he be in 8 years of time?

- a) 22
b) 43
c) 57
d) 92

39. There are 1,400 students studying foreign languages at VKV School and no student studies more than one language. How many students study French?



- a) 280
b) 392
c) 680
d) 1120

45. Multiply two decimal numbers that are less than 1. Which of the following statement is TRUE about the product?

- a) The product is always greater than 1.
- b) The product is in between the two factors.
- c) The product is less than either of the factors.
- d) The product is greater than either of the factors.

46. Mrs. Das planted red flowers in 0.6 part of her garden. She also planted yellow flowers in 0.4 part of her garden. In 0.5 portion of the part with red flowers she also planted white flowers. What part of Mrs. Das garden has both red and white flowers?

- a) 0.1
- b) 0.2
- c) 0.3
- d) 4.600

47. Triangle PQR is isosceles and $\angle PQR$ measures 50° . Which of the following could be the measure of $\angle PRQ$?

- a) 60°
- b) 80°
- c) 100°
- d) 130°

48. To use a floor cleaner, two-thirds of a cup of cleaner must be mixed with one-half gallon of water. If only one-half cup of cleaner is left, how much gallon of water should be mixed with it?

- a) $\frac{1}{4}$
- b) $\frac{1}{3}$
- c) 2.5
- d) $\frac{3}{8}$

49. A wheel with the diameter of 3 feet makes a revolution every 2 minutes. How many feet the wheel travels in 30 minutes?

- a) 3π
- b) 6π
- c) 30π
- d) 45π

50. A jar contains $\frac{1}{3}$ red marbles and $\frac{1}{2}$ blue marbles. The remaining 25 marbles are white. How many marbles does the jar contain?

a) 30

c) 125

b) 55

d) 150

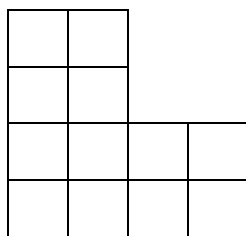
SAMPLE

Name _____

Roll No. _____

PART -II**Max Mark (30)**

1. Divide the given shape in exactly two equal parts? (1)



2. What is the largest multiple of 17 less than 320? (1)

3. Find two decimals whose sum is 1 and difference is 0.5. (1)

4. A train can cover a journey in 6 hrs at 40 km an hour. What should be its speed if the journey is to be covered in only 5 hours? (2)

5. Find the missing number in the given number pattern. (2)

9, 27, 31, 93, ?, 291

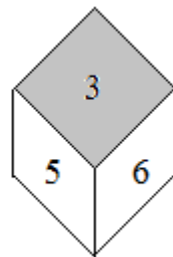
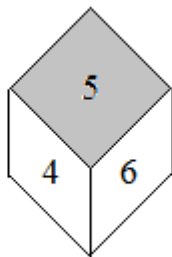
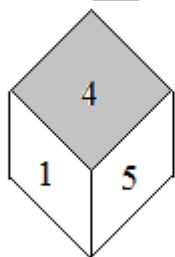
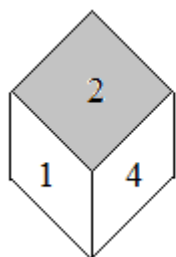
6. Lisa opens a book and notes that the product of the two page numbers facing her is 756. What are the numbers of these two pages? (2)

7. A store sells pens for ₹ 5 each and pencils for ₹ 4 each. If John buys a total of 10 pens and pencils for ₹ 44, how many pens did he buy? (3)

8. Two cars left New Delhi at the same time. The first car travelled south at 72 km/h for 6 hours. The second car travelled north at 64 km/h for 7 hours. Which car travelled farther? Which car got to its destination sooner? (3)

9. A bookseller sold some Mathematics books of Grade V for ₹ 144 on Tuesday, ₹ 108 on Wednesday and ₹ 216 on Thursday. What is the maximum price of each book? How many books did he sell on Thursday? (3)

10. With the help of the pictures of the same dice write the number on the opposite face of the following: (3)



a) 1 _____

b) 2 _____

c) 3 _____

11. Rohit took out half of the balls in a store room and then returned two of them. Siddharth then took out half of the remaining balls in the storeroom and returned 6 of them. Finally Raghav took out half of the rest of the balls and returned one of them. In the end there were ten balls in the store room. How many balls were there in the beginning? (3)

12. Two office tables were bought for ₹ 500 each. One was sold at a gain of 12% while the other at a loss of 12%. Find the selling price of each table and the total gain or loss on the bargain? (3)

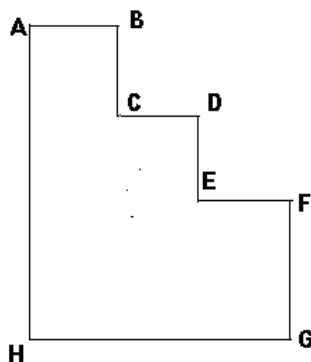
13. A labourer works in the city but goes back to village for a month to look after his house and cow. If he earns ₹ 68970 in a year in the city, find his earnings in 7 months? (3)

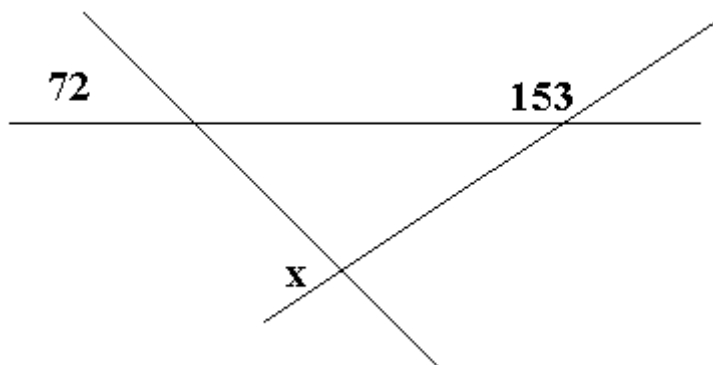
Name _____

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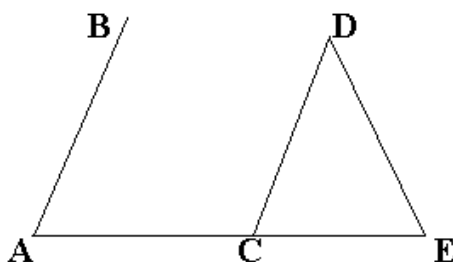
PART -III**Max Mark (20)**

1. Find the perimeter and area of the given figure. (2)

Given $AB=BC=CD=DE=EF$, $FG=4$ cm, $HG=9$ cm

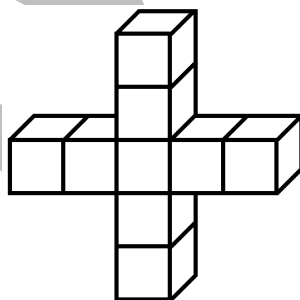
2. Find the value of x . (2)

3. Line segments AB and CD are parallel to each other. In isosceles $\triangle CDE$, sides CD and DE are not equal. If $\angle BAC = 48^\circ$, what is the measure of $\angle CDE$? (2)

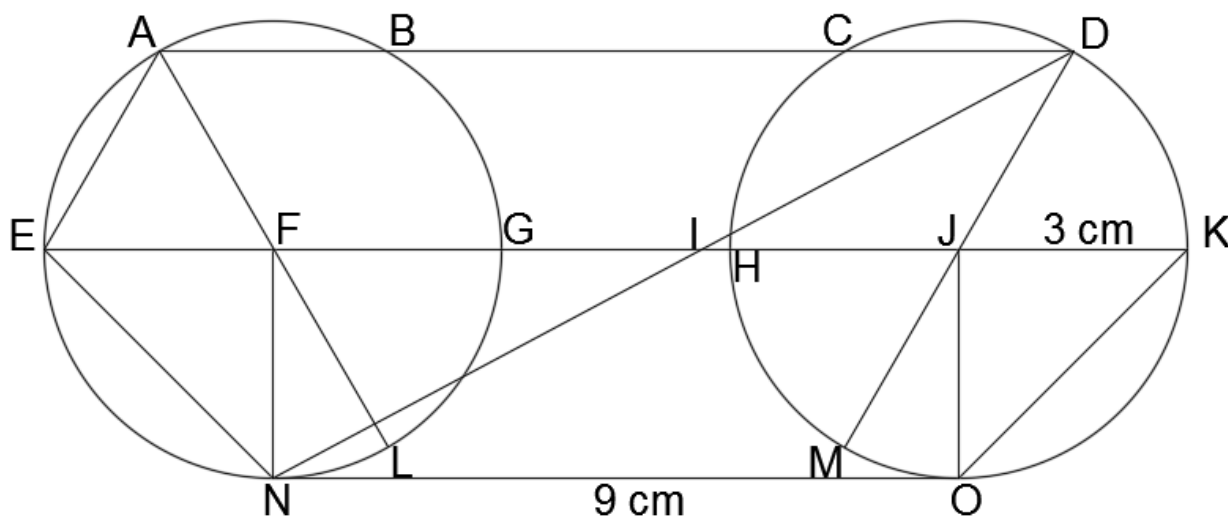


4. By how many degrees does the angle, formed by the hour hand and the minute hand of a clock increase when the time changes from 2:16 pm to 2:17 pm? (2)

5. The solid figure is made up of 1 cm cubes. How many more such cubes are needed to form a cube of side 5 cm? (2)



6. Study the following figure carefully and answer the questions: (10)



Given : $AD = 12\text{ cm}$, $NO = 9\text{ cm}$, radius of both the circles $= 3\text{ cm}$,

$\angle KJO = \angle GFN = 90^\circ$

- i) Number of radii = _____
- ii) Number of chords = _____
- iii) Number of diameters = _____
- iv) Measurement of $\angle JOK$ = _____
- v) Name of the rectangle = _____
- vi) Measurement of AL = _____
- vii) What type of polygon ADIFNE is? = _____
- viii) Number of isosceles triangle = _____
- ix) Measurement of line segment GH = _____
- x) Perimeter of quadrilateral ADJF = _____