



Divine Public School

Bichhia, Gorakhpur

RAMANUJAN OLYMPIAD 2022-23
CLASSES - VI - VIII



NAME: ADM. NO. CLASS SEC..... TIME : 1 hr.

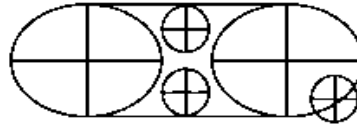
- The sum of a two digit number and the number obtained by reversing its digits is a square number. How many such numbers are possible.
a) 5 b) 6 c) 7 d) 8 ✓
- A small bottle of shampoo can hold 35ml shampoo whereas a large bottle can hold 500 ml of shampoo Jasmine wants to buy the minimum number of small bottle necessary to completely fill a large bottle . How many bottles must see buy?
a) 10 b) 20 c) 25 d) 15 ✓
- The sum of two numbers is 11 and their product is 30 , then the numbers are?
a) 8 and 3 b) 9 and 2 c) 7 and 4 d) 6 and 5 ✓
- In measuring the sides of a rectangle there is an excess of 5% on one side and 2% deficit on the other then the error percentage in the area is-
a) 3.3 b) 3.0 c) 2.9 ✓ d) 2.7
- Fill the missing number

8	3	21
6	5	25
12	2	?

- a) 24 b) 19 c) 22 ✓ d) 20
- Two third of the people in a room are seated in $\frac{3}{4}$ th of the chairs and the rest of the people are standing . If there are 6 empty chairs. How many people are there in the room?
a) 72 b) 36 c) 32 d) 27 ✓
- A circle and two distinct line are drawn on a sheet of paper.What is the largest possible number of point of intersection of these figures?
a) 3 b) 7 c) 9 d) 5 ✓
- Five friends were travelling by train between station A and B. Each one get down at a different station one after the other Nitin gets down before Lata and Shikha but not before Sunil. Anil is not the last to get down .Who got down first from the train?
a) Sunil b) Nitin c) Shikha d) Can not be determined ✓
- In a certain code RAIN is written as 8\$%6 and MORE is written as 7 #8@ .How is REMAIN written in that code
a) 8@7\$%6 ✓ b) 7@#%6 c) #@&\$%6 d) #@7\$%6
- If there are 36 spokes in a bicycle wheel, then the angle between a pair of adjacent spokes is
a) 15° b) 12° c) 10° ✓ d) 18°
- 1 hectare =
a) 10 m^2 b) 100 m^2 c) 1000 m^2 d) 10000 m^2 ✓

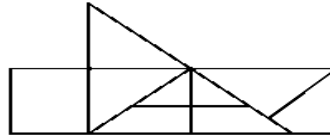
12. How many sectors are there in the following figure ?

- a) 24
- b) 20
- c) 32
- d) 40



13. How many triangles are there in the given figure ?

- a) 11
- b) 13
- c) 10
- d) 12



14. Name the film based on Srinivasa Ramanujan's life

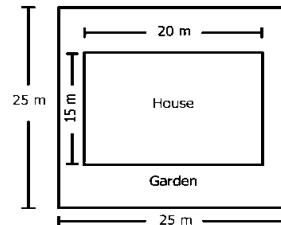
- a) The Man Who Knew Infinity
- b) A Beautiful Mind
- c) Gifted
- d) X + Y

15. G H Hardy gave a personal rating of mathematicians on the scale of 0 to 100. he gave himself a score of 25, J. E. Littlewood 30 and Devid Hilbert 80. Do you know what was his rating for Ramanujan?

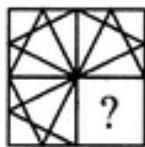
- a) 50
- b) 90
- c) 75
- d) 100

16. Amrita has a square plot with the measurement as shown in the figure. He wants to construct a house in the middle of the plot. A garden is to be developed around the house. Find the total cost of developing a garden around the house at the rate of Rs 55 per m².

- a) Rs 17,885
- b) Rs 17,875
- c) Rs 17,555
- d) Rs 17,000



17. Identify the figure that completes the pattern.



(1)



(2)



(3)



(4)

- a) 1
- b) 2
- c) 3
- d) 4

18. 21, 25, 33, 49, 81, ?

- a) 145
- b) 132
- c) 113
- d) 101

19. In certain language **MATHEMATICS** is coded as 'NBUIFNBUJDT', how is **STATISTICS** coded in that language?

- a) TUBUGTUGDT
- b) TUBUJTUGDT
- c) TUBUJTUJDT
- d) TUBUJTUJBT

20. If @ means -, # means ×, & means ÷ and \$ means +. Value of 125&5#4\$20@30 is

- a) 150
- b) 95
- c) 80
- d) None of these

21. If 20 men consume a certain quantity of rice in 14 days, in how many days will 8 men consume the same quantity of rice?

- a) 35
- b) 45
- c) 30
- d) 25

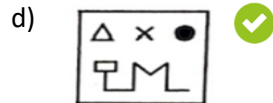
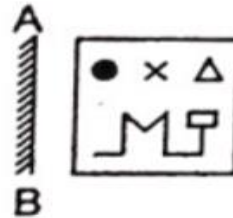
22. Choose the correct alternatives that will continue the same pattern 8, 40, 200, 1000,_____.

- a) 8000
- b) 50000
- c) 5000
- d) None of these

23. In the given series 7 8 6 2 5 3 8 5 9 3 6 8 5 9 6 2 3 6 6 3 2 5 8, Which digits have equal frequency?

- a) 2,3,5
- b) 4,5,6
- c) 3,6,8
- d) 3,5,8

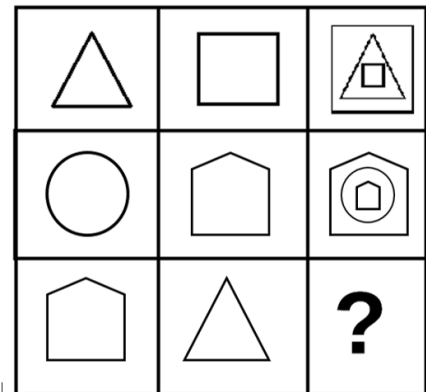
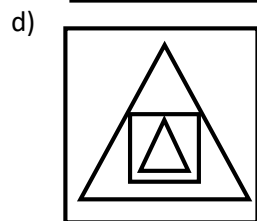
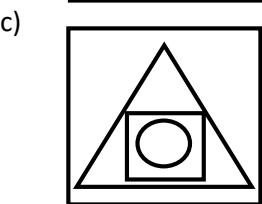
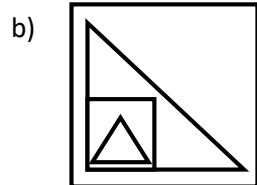
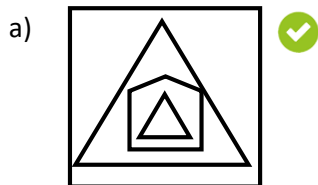
24. Choose the correct mirror image from the alternative when mirror placed on the line AB



25. If P and Q are any two points on a circle, then the line segment PQ is called a

- a) radius of the circle b) diameter of the circle c) chord of the circle d) secant of the circle

26. Which of the following option will complete the given figure matrix-



27. Which notable award was given to Srinivasa Ramanuj for his brilliant work ?

- a) Knighthood b) Fellow of Royal Society c) Bharat ratna d) Nobel Prize

28. $\frac{3}{48}$ is what part of $\frac{1}{12}$?

- a) $\frac{1}{4}$ b) $\frac{1}{2}$ c) $\frac{4}{3}$ d) $\frac{3}{4}$

29. Find the smallest possible length of scale to measure exactly 64 cm, 80 cm, 96 cm.

- a) 9.60 m b) 9.60 cm c) 7.20 m d) 7.20 cm

30. Mangal a worker makes an articles in every $\frac{2}{3}$ hour. If he works $7\frac{1}{2}$ hour ,how many articles will he make?

- a) $11\frac{1}{4}$ b) $11\frac{1}{3}$ c) $11\frac{1}{6}$ d) $11\frac{2}{5}$

31. What value will come when $84 a^2 b^2$ divided by $12ab$?

- a) $7 a^2 b^2$ b) $6 ab$ c) $7 ab$ d) $3 ab$

32. If 12 men could complete a work in 16 days, then in how many days 3 men will complete the same work?

- a) 60 days b) 64 days c) 75 days d) 50 days

33. What is the average of all even numbers between 5 and 15.

- a) 10 b) 8 c) 12 d) 9

34. 5 friends are sitting on a bench A is to the left of B but on the right of C, D is to the right of the B but on the left of E, who are the extremes?

- a) A, B b) A, D c) B, D d) C, E

35. If today is Thursday, then what will be the day on 363rd day ?

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

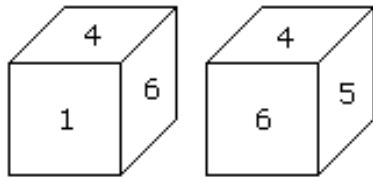
36. If South-East becomes North, North-East becomes West and so on. What will West become?

- a) North-East b) North-West c) South-East d) South-West

37. Starting from the point X, Jayant walked 15 m towards west. He turned left and walked 20 m. He then turned left and walked 15 m. After this he turned to his right and walked 12 m. How far and in which directions is now Jayant from X?

- a) 32 m, South b) 47 m, East c) 42 m, North d) 27 m, South

38. Two positions of a dice are shown below. When number '1' is on the top. What number will be at the bottom?






- a) 3 b) 5 c) 2 d) 6

39. If A is the brother of B; B is the sister of C; and C is the father of D, how D is related to A?

- a) Brother b) Sister c) Nephew d) Cannot be determined

40. Which of the following diagrams indicates the best relation between Sailor, Ship and Ocean ?

- a)  b)  c)  d) 