

39. Each side of a triangle is increased by 10 cm. If the ratio of the perimeters of the new triangle and the given triangle is 5 : 4 then, the perimeter of the given triangle is

- (a) 120 cm (b) 100 cm (c) 90 cm (d) 150 cm

40. Multiplying a negative integer for even number of times gives a _____ result.

- (a) Negative (b) Positive (c) 0 (d) Both (a) and (b)

41. The sum of the three integers lies between -2 and 2 is

- (a) 0 (b) 1 (c) -1 (d) 4

42. The equation of the statement “one-third of a number added to the second multiple of 6 is 24” is

- (a) $\frac{y}{3} = 12 + 24$ (b) $\frac{y}{3} + 2 = 24$ (c) $\frac{y}{3} + 12 = 24$ (d) $\frac{y}{3} = 18 + 24$

43. The algebraic expression of the statement “Product of x and reciprocal of a is subtracted from the product of y and reciprocal of b” is

- (a) $\frac{y}{b} - \frac{x}{a}$ (b) $\frac{y-x}{a-b}$ (c) $xa - yb$ (d) $\frac{1}{yb-xa}$

44. The difference of the place value and face value of the digit 3 in 613728 is

- (a) 3000 (b) 3003 (c) 2997 (d) None of these

45. Which of the following integers is the smallest?

- (a) $|-14|$ (b) $| -(-24) |$ (c) $-|28|$ (d) $-|-30|$

46. If $47.256 = 4A + 7B + 2C + 5D + 6E$, then the value of $5A + 4C + 7E$ is

- (a) 50.407 (b) 50.704 (c) 50.074 (d) 50.740

47. The number nearest to 100000 but greater than 100000 which is exactly divisible by each of 8, 15 and 21 is

- (a) 100800 (b) 100840 (c) 100880 (d) None of these

48. The HCF of two consecutive numbers is always

- (a) 0 (b) 1 (c) 2 (d) Product of the numbers

49. What is two and fifty-six thousandths written as a decimal?

- (a) 0.0256 (b) 0.256 (c) 2.056 (d) 2.56

50. The value of $(a - b)(b - c)$ for $a = 2$, $b = -5$ and $c = -8$ is

- (a) 21 (b) -21 (c) 91 (d) 39

*** All the best ***



MATHEMATICS TALENT HUNT 2024

Organized by : The Pi Group of Mathematics(TPGM), Cooch Behar

Registration No. – S0031696 of 2022-23

Class – VI

Full Mark : 100

Time : 1 Hr 30 mins.

Instructions to the Candidates

1. Candidates must write their Name, Class, Roll No. allotted for the exam and Name of their School correctly in the specific places of the answer sheet.

2. There are 50 questions of 2 marks each. Four possible options of answer are given for each question.

3. Candidates should choose the correct option and completely darken the circle with that option written in it in the answer sheet (OMR). For example, say the correct option for Question Number 10 is (c), then the candidate should darken the circle completely with 'c' written in it against the number 10 of the answer sheet. Use black ball pen or pencil for darkening.

4. There is no negative marking.

1. The smallest 8-digit number using three different digits can be read as

- (a) Ten million two (b) One million two (c) One hundred million two (d) One hundred thousand two

2. The Hindu-Arabic numeral for the Roman number CMXCIX is

- (a) 9999 (b) 99999 (c) 999 (d) None of these

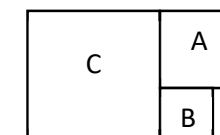
3. The number of lines of symmetry of the figure is

- (a) 0 (b) 4 (c) 2 (d) 1



4. The area of a square A is 25 cm^2 . The perimeter of the square B is 12 cm. Then the area of the square C is

- (a) 625 cm^2 (b) 144 cm^2
(c) 289 cm^2 (d) 64 cm^2



5. A parallelogram with an angle equal to 90° . It is a

- (a) Rectangle (b) Rhombus (c) Square (d) Trapezium

6. Which of the following word is made of the letters having only horizontal line of symmetry?

- (a) HAT (b) MAT (c) MOM (d) BED

7. In how many minutes does the minute hand of a clock turn 120° ?

- (a) 15 minutes (b) 20 minutes (c) 25 minutes (d) 30 minutes

8. How many faces does a tetrahedron have?

- (a) 3 (b) 4 (c) 6 (d) None of these

9. If both the terms of a ratio are multiplied by 10, then the value of ratio will -

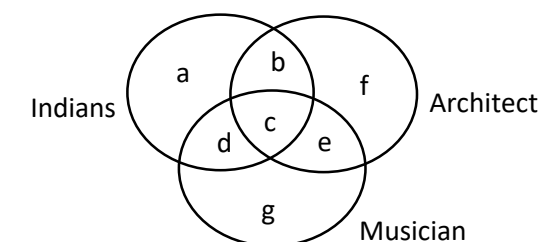
- (a) be 10 times more (b) decrease (c) increase (d) remain the same

10. The centre of the circle always lies in the interior of the

- (a) Minor segment (b) Semi circle (c) Major segment (d) Minor arc

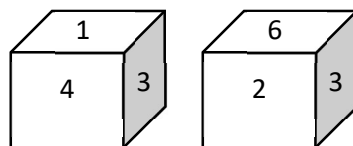
11. Study the diagram carefully. Architects who are neither Indians nor musicians are represented by

- (a) b (b) c (c) f (d) g



12. Two positions of a dice are shown below. When number 3 is at the top, which number will be at the bottom?

- (a) 1 (b) 2
(c) 5 (d) 6



13. In a school trip, Bus I has 4 teachers and 14 students, Bus II has 3 teachers and 7 students, Bus III has 4 teachers and 28 students. Which of the buses has the least teacher-student ratio?

- (a) Bus I (b) Bus II (c) Bus III (d) Can not say

14. A boat is sailing N-E. A little later it is formed sailing South. Through which angle has it turn?

- (a) 150° (b) 135° (c) 180° (d) 90°

15. The part of a rotation is shown by a protractor is

- (a) 1 (b) $\frac{1}{2}$ (c) 2 (d) None of these

16. If you are facing east and turn clockwise through 270° , which direction would you face now?

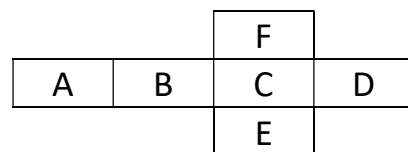
- (a) South (b) West (c) East (d) North

17. Take two 30° - 60° - 90° set squares and join them diagonally. Which figure would you get?

- (a) Rhombus (b) Square (c) Rectangle (d) Trapezium

18. Which face is opposite face A, when the following net is folded to form a cube?

- (a) C (b) A (c) D (d) E



19. A rope of length 60 cm is cut into two pieces. One piece is used to form a rectangle of length 12 cm and width 6 cm. The other piece is bent into a regular hexagon. What is the length of each side of the hexagon?

- (a) 5 cm (b) 4 cm (c) 10 cm (d) 6 cm

20. A rectangle has an area 18 cm^2 . If its length and width are whole numbers, what is the greatest possible perimeter?

- (a) 36 cm (b) 38 cm (c) 22 cm (d) None of these

21. Seven square flower beds each of sides 0.8 m are dug inside a park of 3.2 m wide and 5.6 m long. What is the area of the remaining part of the park?

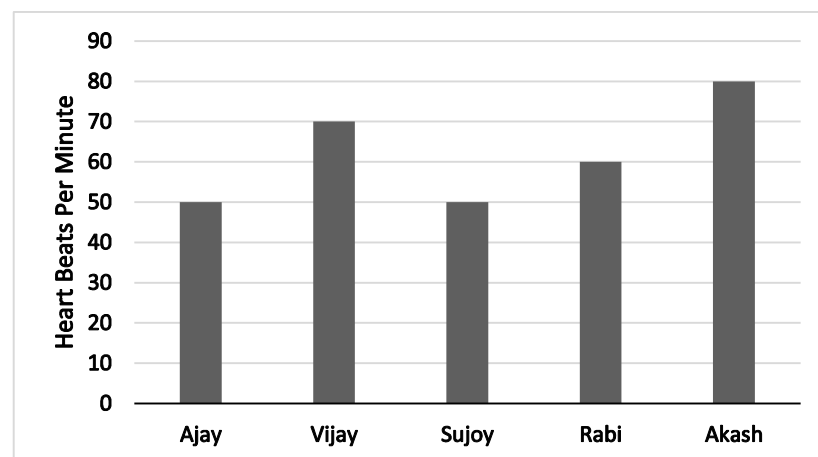
- (a) 17.92 m^2 (b) 13.44 m^2 (c) 4.48 m^2 (d) 2.56 m^2

22. The number of times a particular value occurs in data is called

- (a) Mean (b) Mode (c) Median (d) Frequency

23. What is the average number of heart beats per minute for the five people named on the graph

- (a) 56 (b) 62
(c) 64 (d) 52



24. The value of X in the proportion $9:5 :: 36:(X-3)$ is

- (a) 38 (b) 23 (c) 18 (d) 28

25. In set-builder method, the null set is represented by

- (a) $\{ \}$ (b) $\emptyset$ (c) $\{x: x \neq x\}$ (d) $\{x: x=x\}$

26. Who was the first mathematician to calculate the value of π ?

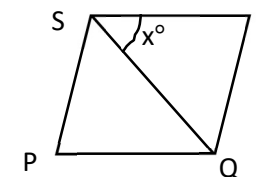
- (a) Aristotle (b) Euclid (c) Aryabhata (d) Archimedes

27. In a square ABCD, $AC = (7x-2) \text{ cm}$ and $BD = (11x-10) \text{ cm}$. Then $AC = ?$

- (a) 11 cm (b) 9 cm (c) 12 cm (d) 8 cm

28. Which expression represents the measure of $\angle P$ in Rhombus PQRS.

- (a) x° (b) $2x^\circ$
(c) $(180-x)^\circ$ (d) $(180-2x)^\circ$



29. The common name of a square prism is

- (a) Cuboid (b) Cube (c) Pyramid (d) Polygon

30. A constant is a polynomial of degree

- (a) 1 (b) 0 (c) 2 (d) None of these

31. The set $A = \{x: x^2 \leq 10, x \in \mathbb{Z}\}$ in the roster form is

- (a) $\{\pm 1, \pm 2, \pm 3\}$ (b) $\{1, 2, 3\}$ (c) $\{0, 1, 2, 3\}$ (d) $\{0, \pm 1, \pm 2, \pm 3\}$

32. Find the missing number, if a certain rule is followed row wise or column wise

- (a) 22 (b) 20 (c) 21 (d) 24

4	8	20
9	3	15
6	6	?

33. If $2a = 3b = 4c$ then, $a : b : c$ is

- (a) $4 : 3 : 6$ (b) $3 : 4 : 6$ (c) $3 : 6 : 4$ (d) $6 : 4 : 3$

34. If $(3x-2y) : (x+3y) = 5 : 6$ then, $(2x-5y) : (3x+4y)$ is

- (a) $133 : 11$ (b) $11 : 133$ (c) $-11 : 133$ (d) None of these

35. Let $S = \{x: x \text{ is a positive multiple of 3 less than 100}\}$ and $P = \{x: x \text{ is a prime number less than 20}\}$ the $n(S) + n(P)$ is

- (a) 34 (b) 41 (c) 30 (d) 33

36. The mean proportion of $\frac{1}{12}$ and $\frac{1}{75}$ is

- (a) 0.30 (b) $\frac{1}{30}$ (c) $\frac{1}{3}$ (d) None of these

37. The solution of $1.32y + 0.02y = 1.19 + y$ is

- (a) $y = 3\frac{1}{2}$ (b) $\frac{2}{7}$ (c) $3\frac{1}{3}$ (d) None of these

38. If $\frac{x}{0.3} = 3.3$ then $100x$ is

- (a) 99 (b) 0.99 (c) 9.9 (d) 990