

KENDRIYA VIDYALAYA SANGATHAN, RAIPUR REGION
SESSION ENDING EXAM (2024-25)

SUBJECT: MATHEMATICS

TIME: 2:30 Hrs.

CLASS: VI

MM: 60

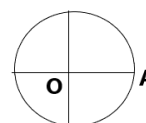
General Instructions:

1. This Question Paper has 5 Sections A-E.
2. Section A has 15 MCQs carrying 1 mark each
3. Section B has 6 questions carrying 02 marks each.
4. Section C has 5 questions carrying 03 marks each.
5. Section D has 2 questions carrying 05 marks each.
6. Section E has 2 case based integrated units of assessment (04 marks each)
7. All Questions are compulsory

Section A: Multiple Choice Questions (15 x 1 = 15 marks)

1. The perimeter of a square with a side of 8 cm is:
 a) 16 cm b) 24 cm c) 32 cm d) 64 cm
2. What fraction of a day is 6 hours?
 a) $\frac{1}{2}$ b) $\frac{1}{4}$ c) $\frac{1}{6}$ d) $\frac{1}{3}$
3. What is the sum of -3 and 7?
 a) 4 b) -4 c) 10 d) -10
4. The reflection of the letter "B" is:
 a) Same as "B" b) Looks like "P" c) Looks like "D" d) Looks reversed
5. The perimeter of a rectangle is $2(l + b)$, If $l = 12$ cm and $b = 8$ cm, the perimeter is:
 a) 20 cm b) 24 cm c) 40 cm d) 96 cm
6. Convert $3\frac{1}{2}$ into improper fraction.
 a) $\frac{7}{2}$ b) $\frac{6}{2}$ c) $\frac{5}{2}$ d) $\frac{9}{2}$
7. Which of the following fractions is in simplest form?
 a) $\frac{8}{12}$ b) $\frac{3}{4}$ c) $\frac{6}{10}$ d) $\frac{9}{15}$
8. The prime factorization of 56 is-
 a) $2 \times 2 \times 2 \times 7$ b) 2×28 c) $4 \times 2 \times 7$ d) 1×56

9. In given figure < O is the centre of the circle.



Distance OA is called

- (a) Diameter (b) radius (c) perimeter (d) arc

10. From the given data, can you tell how many students like Gujiya?

Sweets	Tally Marks	No. of Students
Jalebi	I	6
Gulab Jamun		9
Gujiya		_____

- a) 6 b) 9 c) 13 d) 16

11. What is the value of : $-8+(-3)-8+(-3)-8+(-3)$?

- a) -11 b) 5 c) -33 d) 11

12. How many lines of symmetry does an equilateral triangle have?

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

13. The smallest angle of rotational symmetry for a square is

- a) 180^0 b) 60^0 c) 90^0 d) 360^0

14.A _____ represents data through pictures of objects.

- a) bar graph b) line graph c) pictograph d) frequency

15.Complete the expression: $(+40)+ \underline{\hspace{2cm}} = +200$

- a) 200 b) 140 c) 160 d) 240

Section B: Short Answer Questions (6 x 2 = 12 marks)

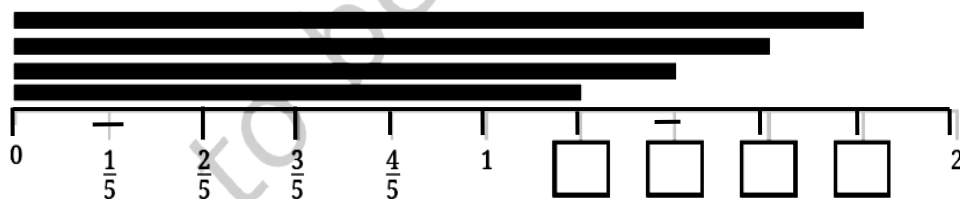
16. Find the perimeter of a square whose side is 12 cm.

17. Draw a rough sketch of a square and draw lines of symmetry.

18. Construct an angle of 60^0 using a compass.

19. Give four numbers such that their sum is -8.

20. Write the fractions that gives the lengths of the black lines in the respective boxes:-



21. The prime factorization of a number has one 2,two 3s and one 11.What is the number?

Section C: Medium Answer Questions (5 x 3 = 15 marks)

22. Fill the boxes with prime numbers only, such that the product of each row is the number to the right of the row and the product of each column is the number below the column.

			105
			20
			30
28	125	18	

OR Match the correct column

Number divisible by	Numbers
2	2405
3	248
5	369

23. A farmer has a rectangular field having length 230 m and breadth 160 m .He wants to fence it with three rounds of rope. What is the total length of the rope needed?

24. Geeta bought $\frac{2}{5}$ meter of lace and Shamim bought $\frac{3}{4}$ meter of the same lace to put a complete border on a table cloth whose perimeter is 1 m long. Find the total length of the lace they both have bought. Will the lace be sufficient to cover the whole border?

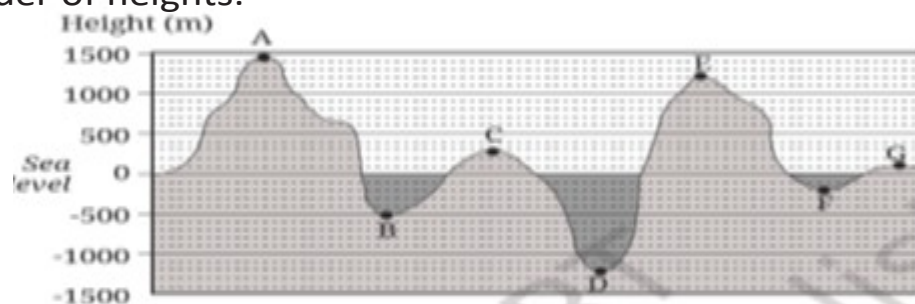
25.This is a picture of the new Parliament Building in Delhi.



(i)Does the outer boundary of the picture have reflection symmetry? If so, draw the lines of symmetries.

(ii) How many are they?

26. Looking at the geographical cross section showing the height different points, write the points A, B, C, D, E, F, G in a sequence of decreasing order of heights.



Section D: Long Answer Questions (2 x 5 = 10 marks)

27. Rahul is working on a project about prime numbers. He writes down all the

prime numbers between 1 and 50. He notices some patterns and uses these numbers to answer a few questions. The prime numbers between 1 and 50 are: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47

Now answer the following questions:-

- (a) Find the sum of all prime numbers between 1 and 20.
- (b) What is the difference between the largest and smallest prime numbers between 1 and 50?
- (c) How many prime numbers are odd?
- (d) Identify the only even prime number.

28. Construct a rectangle in which one of the diagonals divides the opposite angles into 50° and 40° . Write the steps of construction also.

OR

Construct a house in which all the sides are of length 7 cm using ruler and compass. Write steps of construction also.

Section E: Case-Based Questions (2 x 4 = 8 marks)

29. The number of books borrowed by 5 children from their school library is as follows:

Riya: 8 books Arjun: 10 books. Kiran : 6 books. Sameer: 12 books.
Meera: 14 books.

Answer the following:

- a) Draw a bar graph for the given data.
- b) Who borrowed the most number of books?
- c) Who borrowed the least number of books?

30. Ravi and Neha are designing a rectangular garden in their school. The length of the garden is 20 meters, and the width is 15 meters. They also plan to surround the garden with a path that is 2 meters wide. Now answer the following questions:-



- a) Calculate the perimeter of the rectangular garden.
- b) Find the area of the rectangular garden.
- c) The school decides to plant grass in the garden . If the cost of planting grass is ₹50 per square meter, how much will it cost to cover the entire garden?