Indian School Al Wadi Al Kabir

Mid Term Examination (2024-25)

Mathematics - Set II

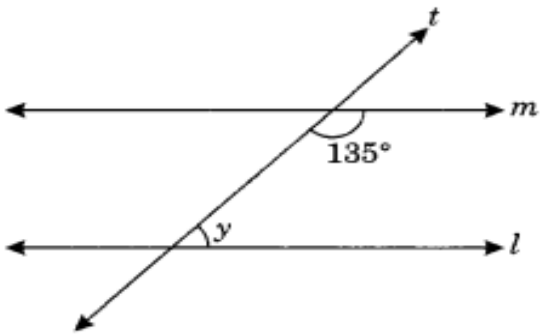
CLASS: VII | Max. Marks: 80

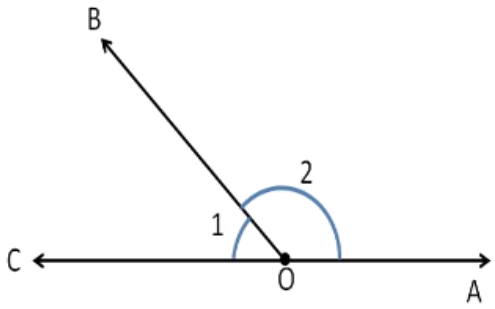
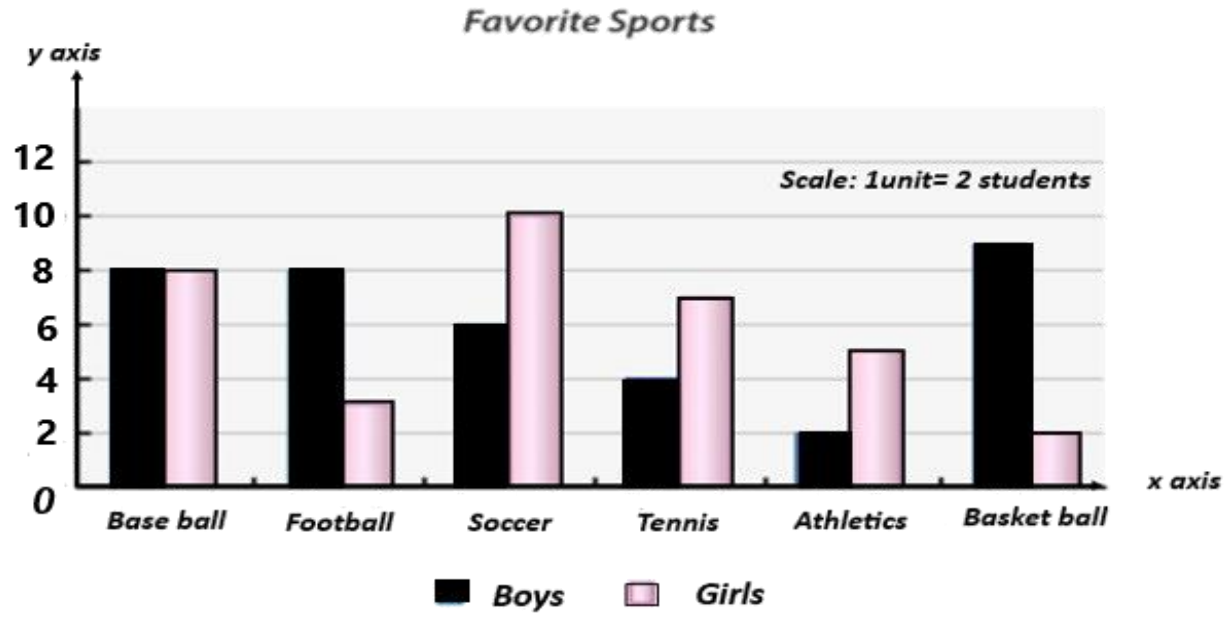
Date: 19-09-2024 | Time: $2\frac{1}{2}$ hours

***General Instructions*:**

1. This question paper contains 4 sections, Section A to D
2. All questions are compulsory.
3. Section A has 20 questions carrying 1 mark each.
4. Section B has 5 questions carrying 2 marks each.
5. Section C has 6 questions carrying 3 marks each.
6. Section D has 8 questions carrying 4 marks each.
7. This question paper contains **6** pages.

Section A: Multiple Choice Question (Q.1 to Q.15) of **1** mark each							
1.	Find the mode of: 24, 26, 22, 24, 24, 26, 24, 20, 24, 28, 24						
	A	28	**B**	26	**C**	24	**D**	20
2.	The product of $(-25 \times 40) \times (-635)$ is equal to:						
	A	15875	**B**	(-63500)	**C**	(-25400)	**D**	635000
3.	Find the median of the data: 24, 36, 46, 17, 18, 25, 35						
	A	25	**B**	17	**C**	46	**D**	24
4.	Hari purchased 2.5 kg of potatoes at the rate of ₹ 24 per kg. How much money should he pay?						
	A	₹ 6.00	**B**	₹ 60.0	**C**	₹ 6000	**D**	₹ 600
5.	Name the property: $-13 \times (-15 + 12) = [(-13) \times -15] + [(-13) \times (12)]$						
	A	commutative property	**B**	associative property	**C**	distributive property	**D**	Multiplicative Identity
6.	The cost of 100 fancy caps is ₹ 3260. Find the cost of one such cap?						
	A	₹ 32600	**B**	₹ 3.260	**C**	₹ 32.60	**D**	₹ 326.0

7.	If $l \parallel m$, then the value of y is:  							
	A	135^0	**B**	45^0	**C**	145^0	**D**	55^0
8.	Which of the following pairs of angles are not supplementary?							
	A	130° and 50°	**B**	120° and 70°	**C**	95° and 85°	**D**	150° and 30°
9.	An equation for "The sum of two times a number and 15 is 47" is:							
	A	$2(x+15)=47$	**B**	$2x-15=47$	**C**	$2x+15=47$	**D**	$x+15=47$
10.	John cuts a ribbon of length $\frac{15}{4}$ cm into smaller pieces of length $\frac{3}{4}$ cm each. How many pieces of ribbon will john get?							
	A	45	**B**	16	**C**	60	**D**	5
11.	Find the reciprocal of $(\frac{-1}{2} \times \frac{3}{4})$							
	A	$\frac{3}{8}$	**B**	$\frac{-1}{4}$	**C**	$\frac{-8}{3}$	**D**	$\frac{-3}{4}$
12.	If 3 less than 5 times a number is 27, then the number is:							
	A	6	**B**	5	**C**	24	**D**	8
13.	The standard form of the rational number $\frac{21}{-28}$ is:							
	A	$\frac{-3}{4}$	**B**	$\frac{21}{7}$	**C**	$\frac{-21}{28}$	**D**	$\frac{3}{4}$

14.	The value of "n" in the equation $7n + 5 = 19$						
	A	-2	**B**	2	**C**	1	**D**	-4
15.	In the given figure, $\angle 1 = 73°$, then the measure of $\angle 2$?  						
	A	$103°$	**B**	$117°$	**C**	$107°$	**D**	$93°$
16.	**Source based Question -5 Marks** The bar graph shows the result of a survey conducted among students to find their favorite sports. Observe the graph and answer the following questions:  						
I	Which sport is preferred by the maximum number of girls?						
	A	Basket ball	**B**	Base ball	**C**	Soccer	**D**	Athletics
II	What is the total number of students opted for tennis?						
	A	16	**B**	11	**C**	7	**D**	3

III	Which game is chosen by an equal number of boys and girls?							
	A	Base ball	**B**	Soccer	**C**	Basket ball	**D**	Tennis
IV	In which game the number of girls is double that of athletics?							
	A	Base ball	**B**	Football	**C**	Tennis	**D**	Soccer
V	Which sport is preferred by the minimum number of boys?							
	A	Tennis	**B**	Athletics	**C**	Base ball	**D**	Football

Section B: Short Answer Questions (Type – 1) of **2** marks each (Q.17 to Q.21)

17. The marks obtained in a class test are given below. Observe the data and answer the following questions: 4, 6, 7, 5, 3, 5, 4, 5, 2, 6, 2, 5, 1, 9, 6, 5, 8, 4, 6, 7

(i) Which number is the highest?

(ii) Which number is the lowest?

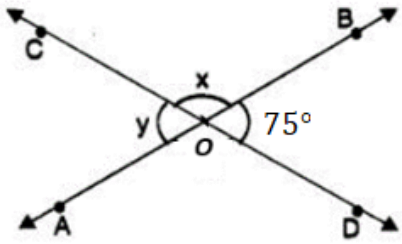
(iii) What is the range of the data?

18. Raju's father's age is 5 years more than three times Raju's age. Find Raju's age, if his father is 44 years old. (Set up an equation and solve it.)

19. A bird is flying at 450 ft high in the sky. If the bird descends at the rate of 15 ft/min, how long will it take to reach the ground?

20. The sum of two rational numbers is $\frac{17}{-4}$. If one of them is $\frac{-7}{3}$, find the other number.

21. If $\angle BOD = 75°$, find the value of $\angle x$ and $\angle y$



Section C: Long Answer Questions (Type – 1) of **3** marks each (Q.22 to Q.27)

22. A cricketer scores the following runs in eight innings:
58, 76, 40, 35, 46, 45, 10, 90. Find the mean score.

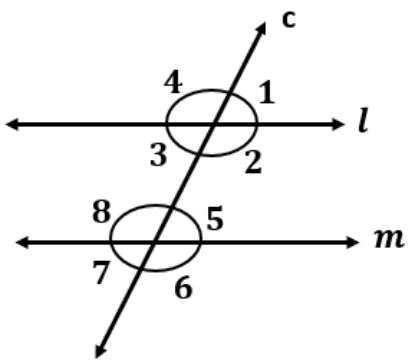
23. Verify that $a \times (b + c) = (a \times b) + (a \times c)$ for the values of $a = 12$, $b = (-4)$, $c = 2$.

24. State the property that is used in each of the following statements:

i) If $l \parallel m$, then $\angle 1 = \angle 5$

ii) If $\angle 2 = \angle 8$ then, $l \parallel m$

iii) If $\angle 2 + \angle 5 = 180^0$ then, $l \parallel m$



25. Ravi bought a rectangular plot of length 25.8 m and breadth 23.5 m.

(i) Find the area of the plot.

(ii) If the cost of tiling 1 m^2 area is ₹ 70, find the cost of tiling the entire area.

26. In an isosceles triangle, the base angles are equal. The vertex angle is 40°. What are the base angles of the triangle? (Remember, the sum of three angles of a triangle is 180°).

27. Represent the following rational numbers on the same number line.

$\frac{-3}{4}$, $\frac{1}{4}$, 0 and $\frac{3}{4}$

Section D: Long Answer Questions (Type – 2) (Q.28 to Q.33)

& Case study (Q.34 &35) of **4** marks each

28. List any four rational numbers between the following rational numbers: $\frac{4}{3}$ and $\frac{7}{5}$

29. Jawed says that he has 7 marbles more than five times the marbles Rajul has. Jawed has 37 marbles. How many marbles does Rajul have?

30. The sale of books in a bookstore in four consecutive years are given below. Draw double bar graph for the data.

Year	**2006**	**2007**	**2008**	**2009**
Novels	300	400	450	600
Short stories	500	350	600	500

31. The temperature at 12 noon was 10°C above zero. If it decreases at the rate of 2°C per hour until midnight.

(i) What would be the temperature at 4 pm?

(ii) At what time would the temperature be $8℃$ below zero?

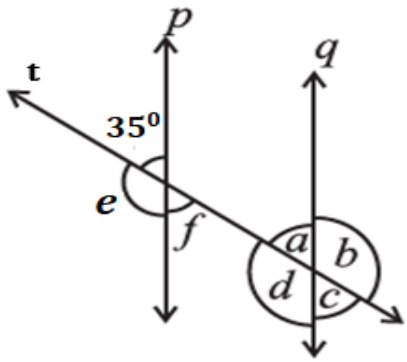
(iii) What would be the temperature at mid-night?

(iv) When the temperature reaches $(-4℃)$ the alarm rings. What time would be the alarm rings?

32. Nina bought 17.50kg of tomatoes at ₹ 19.60 per kg, 3.250 kg of cauliflower at ₹ 9.80 per kg.

i) What is the total weight of vegetables in kg did she buy?

ii) How much did she pay to the shopkeeper altogether?

33.	If $p \parallel q$, and $'t'$ is a transversal, then find measures of the angles a, b, c, d, e and f. 
34.	**Case Study-1** In a group of 100 students , $\frac{3}{10}$ of the total number of students participated in art , $\frac{1}{10}$ of the total number participated in dance , 35 students participated in music and the remaining students in sports. (a) How many students participated in art? (b) How many students participated in dance? (c) What fraction of the students participated in music? (d) How many students participated in sports? 
35.	**Case Study-2** A street fruit vendor has mangoes, apples and oranges in his fruit baskets. If the number of oranges is 73, answer the following: i) The number of oranges is 4 less than three times the number of mangoes. How many mangoes are there? ii) The number of oranges is 3 more than twice the number of apples. How many apples are there? 

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