**INDIAN SCHOOL AL WADI AL KABIR**

Mid Term Examination (2025-26)

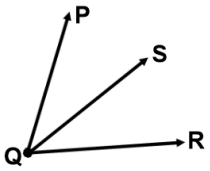
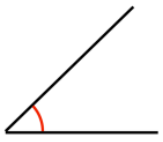
Class: Sub: MATHEMATICS Max Marks: 80

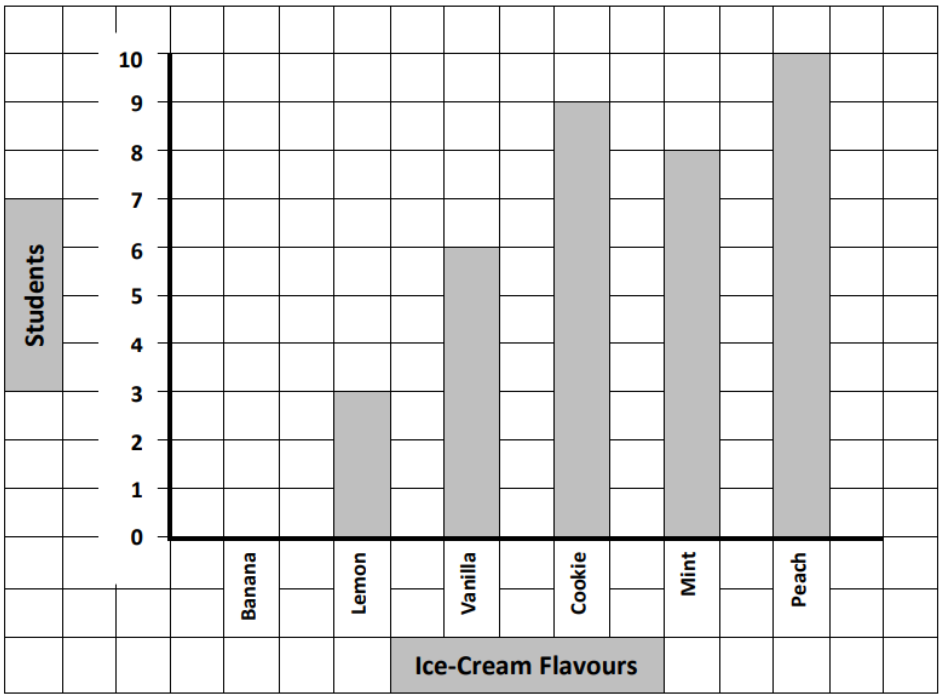
Date: Set- 1 (ANSWER KEY) Time: $2\frac{1}{2}$ hours

***General Instructions*:**

1. This question paper contains 4 sections, Sections 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 pages.

| **Section A**: Multiple Choice Question (Q.1 to Q.15) of **1** mark each | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **1.** | Which of the following number is a palindrome? | | | | | | | |
| | **A** | | **B** | 12321 | **C** | | **D** | |
| **2.** | How many degrees are in a full turn? | | | | | | | |
| | **A** | $360^0$ | **B** | | **C** | | **D** | |
| **3.** | Which pair of numbers is twin prime? | | | | | | | |
| | **A** | | **B** | | **C** | | **D** | 5 and 7 |
| **4.** | How many different lines can be drawn that passes through only one point? | | | | | | | |
| | **A** | | **B** | | **C** | | **D** | infinite |
| **5.** | The prime factorization of 24 is: | | | | | | | |
| | **A** | | **B** | | **C** | 2×2×2×3 | **D** | |
| **6.** | What is the smallest prime number? | | | | | | | |
| | **A** | 2 | **B** | | **C** | | **D** | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **7.** | Ray QS is the angle bisector of ∠PQR. If ∠PQR=$70^0$, what is the measure of ∠PQS?<br>  <br> | | | | | | |
| | **A** | | **B** | $35^0$ | **C** | | **D** |
| **8.** | Which of the following number is a supercell in the grid?<br>30 \| 45 \| 70 \| 90 \| 35 \| 20 | | | | | | |
| | **A** | | **B** | | **C** | | **D** 90 |
| **9.** | Which of the following numbers is divisible by 4? | | | | | | |
| | **A** | | **B** | | **C** 2100 | | **D** |
| **10.** | On a number line 1655, would be exactly between | | | | | | |
| | **A** 1650 & 1660 | | **B** | | **C** | | **D** |
| **11.** | In a pictograph if ⌂⌂⌂⌂⌂⌂ stand for 30, how much does ⌂⌂ stands for? | | | | | | |
| | **A** | | **B** | | **C** | | **D** 10 |
| **12.** | Which of the following is a factor of 12? | | | | | | |
| | **A** | | **B** 3 | | **C** | | **D** |
| **13.** | Which angle is acute angle? | | | | | | |
| | **A**  | | **B** | | **C** | | **D** |
| **14.** | The number represented by the given tally mark is:<br> | | | | | | |
| | **A** | | **B** 17 | | **C** | | **D** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **15.** | In the Collatz Sequence, which number comes after 7? | | | | | | | |
| | **A** | | **B** | | **C** | 22 | **D** | |
| **Q16.** | Consider the bar graph given below. All class 5 students at The Victoria School were asked to choose their most favorite ice-cream flavour.<br>  <br> | | | | | | | |
| **I** | How many students like cookie ice-cream? | | | | | | | |
| | **A** | | **B** | | **C** | 9 | **D** | |
| **II** | How many students like peach ice-cream? | | | | | | | |
| | **A** | | **B** | 10 | **C** | | **D** | |
| **III** | Which flavour is not preferred by any of the students? | | | | | | | |
| | **A** | Banana | **B** | | **C** | | **D** | |
| **IV** | How many more students prefer peach than vanilla ice-cream? | | | | | | | |
| | **A** | | **B** | 4 | **C** | | **D** | |
| **V** | Calculate the total number of students attended the survey. | | | | | | | |
| | **A** | | **B** | | **C** | | **D** | 36 |

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

**17.** Find the first four multiples of 9.

**9, 18, 27, 36** **( 4 × ½ = 2 m)**

**18.** Use factor tree diagram to find the prime factorization of 84.

Final prime factors: **2 × 2 × 3 × 7 = $2^2$ × 3 × 7** **( 4 × ½ = 2 m)**

**19.** The pictograph below shows the number of students present in class on each working day of the week.

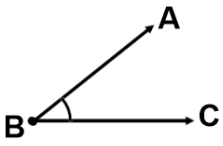
☺ Represents 5 children

| | |
|---|---|
| Monday | ☺☺☺☺☺☺☺ |
| Tuesday | ☺☺☺☺ |
| Wednesday | ☺☺☺☺ |
| Thursday | ☺☺☺☺☺☺ |
| Friday | ☺☺☺ |

i) How many children were present on Monday? **35 Children** **(1m)**

ii) On which day of the week were the lowest number of children present? **Friday** **(1m)**

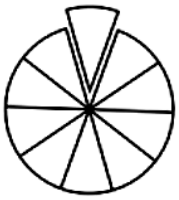
**20.** Write the name of the given angle in two different ways.




**∠ABC / ∠CBA / ∠B** **( 2 × 1 = 2 m)**

**21.** Riya checks her clock and notices a palindromic time 10:01. Write any other two examples of palindromic times on a 24 – hour clock.

Eg: **11:11 / 12:21 / 05:50 / 02:20 / 20:02 / 21:12 / 22:22 / 23:32** **( 2 × 1 = 2 m)**

| | |
|---|---|
| **Section C**: Long Answer Questions (Type – 1) of **3** marks each (Q.22 to Q.27) | |
| **22.** | When finding the factors of 35 and 15, Aisha and Rohan noticed some numbers are common to both. Find these common factors by listing the factors of 35 and 15.<br>**Factors of 35 = 1, 5, 7, 35 ( 1 m)**<br>**Factors of 15 = 1, 3, 5, 15 ( 1 m)**<br>**Common factors = 1, 5 ( 2 × ½ = 1 m)** |
| **23** | Draw the given angles using protractor.<br>(i) Right angle ∠ABC. **(Drawing 1 m, Naming ½ m )**<br>(ii) $60^0$ angle ∠PQR. **(Drawing 1 m, Naming ½ m )** |
| **24.** | Start with the number 7463. Apply Kaprekar's routine and show all the steps to reach the Kaprekar constant.<br>**Arrange the digits in order: 7643 and 3467 ( 2 × ½ = 1 m)**<br>**Subtract: 7643 – 3467 = 4176 (½ m)**<br>**Arrange the digits in order: 7641 and 1467 ( 2 × ½ = 1 m)**<br>**Subtract: 7641 – 1467 = 6174 (½ m)** |
| **25** | Nidhi wants to check whether 56 is divisible by 14. Use the prime factorization method to determine if 56 is divisible by 14. Write the reason for your answer.<br>**Prime factorization of 56: 2×2×2×7 (1 m)**<br>**Prime factorization of 14: 2×7 (1 m)**<br>**Reason and answer (56 is divisible by 14) (1 m)** |
| **26.** | A pizza is cut into 10 equal slices.<br>(i) What is the angle of each slice at the centre? Show your workings.<br>(ii) What type of angle is it? (Acute / Obtuse / Right / Straight)<br>(iii) How many slices of pizza are required to form a straight angle.<br>  <br>**(i) 360÷10=36 or Acute (1 m) (ii) Acute angle (1 m) (iii) 5 slices (1 m)** |

**27** Three friends decided to count the number of glasses of milk they drink in one month. Draw a pictograph to illustrate the given data by using the key: ◯ = 10 glasses.

| Mark | Joe | Peter |
|---|---|---|
| 50 glasses | 40 glasses | 70 glasses |

**50 glasses (1 m), 40 glasses (1 m), 70 glasses (1 m)**

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

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

**28.** The favourite colours of 25 students are recorded as follows. Arrange this information in a table using **tally marks** and **frequencies** for each colour.

**Red, Blue, Green, Red, Green, Red, Green, Blue, Red, Green, Blue, Red, Red, Blue, Yellow, Blue, Green, Blue, Green, Red, Yellow, Yellow, Red, Blue, Yellow.**

**Red – 8 Tally (1 m), Blue – 7 Tally (1 m), Green – 6 (1 m), Yellow – 4 (1 m)**

**29.** Consider the list of numbers.

70, 71, 79, 80, 83, 86, 89, 90, 96, 97

(i) Write any four prime numbers from the given list.

**71, 79, 83, 89, 97 (Any 4) (4 × ½ = 2 m)**

(ii) Write any four composite numbers from the given list.

**70, 80, 86, 90, 96 (Any 4) (4 × ½ = 2 m)**

**30.** What is the number whose prime factorization has:

(i) one 2, two 3s and one 5

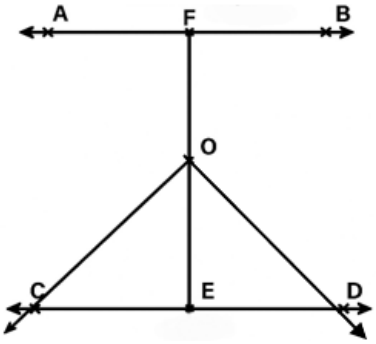
**2×3×3×5= 90 Prime factorization (1 m), Ans: 90 (1 m)**

(ii) one 3, one 5, one 7

**3×5×7=105 Prime factorization (1 m), Ans: 105 (1 m)**

**31.**

Consider the given figure.




(i) Write the name of two lines.

**$\overleftrightarrow{AB}$ , $\overleftrightarrow{CD}$ (2 × ½ = 1 m)**

(ii) Write the name of two linesegmants.

**$\overline{FO}$ , $\overline{OE}$ , $\overline{AF}$ , $\overline{FB}$, $\overline{CE}$, $\overline{ED}$... (Any 2 × ½ = 1 m)**

(iii) Write the name of two rays.

**$\overrightarrow{OC}$ , $\overrightarrow{OD}$ , $\overrightarrow{FB}$, $\overrightarrow{FA}$, $\overrightarrow{ED}$... (Any 2 × ½ = 1 m)**

(iv) ) Write the two arms of the angle ∠COD

**$\overrightarrow{OC}$ and $\overrightarrow{OD}$ (2 × ½ = 1 m)**

**32.**

Write the digit sum of the numbers from 255 to 262

**255 → 12, 256 → 13, 257 → 14, 258 → 15, 259 → 16, 260 → 8, 261 → 9, 262 → 10 (8 × ½ = 4 m)**

**33.**

In a school, there are four sections of Class VI. The number of students in each section is given below. Prepare a bar graph for the given data.

| Section | A | B | C | D |
|---|---|---|---|---|
| Number of students | 40 | 35 | 30 | 35 |

**A – (1 m) , B - (1 m) , C - (1 m) , D - (1 m)**

**34.**

**Case Study-1**

Riya looked at the wall clock in her study room. At 3:00, the hands of the clock form a particular angle. Later, she again checked the clock at 5:00 and 6:00.

(i) What type of angle is formed at 3:00? (Acute / Obtuse / Right / Straight)

**Right (1 m)**

(ii) What type of angle is formed at 6:00? (Acute / Obtuse / Right / Straight)

**Straight (1 m)**

(iii) What type of angle is formed at 5:00? (Acute / Obtuse / Right / Straight)

| | | |
|---|---|---|
| | What is the angle measurement (in degrees) of the clock at 5:00? **(2 m)**<br>**Obtuse (1 m) , $150^0$ (1 m)** |
| **35.** | **Case Study-2**<br>Aarav and his friends are playing a number game with the following cards:<br>12, 13, 24, 35, 39, 47, 52, 71<br> <br><br>(i) Write any two numbers from the cards that are divisible by **2**. **(1 m)**<br>**12, 24, 52 (any two) (1 m)**<br>(ii) Write any two numbers from the cards that are divisible by **3.** **(1 m)**<br>**12, 24, 39 (any two) (1 m)**<br>(iii) Check whether **12 and 24** are co-prime or not. Show your workings. **(2 m)**<br>**Factors of 12: 1, 2, 3, 4, 6, 12. (½ m)**<br>**Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24. (½ m)**<br>**Common factors: 1, 2, 3, 4, 6, 12. (½ m)**<br>**(12, 24) are not co-prime. (½ m)** |

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