



SCHOOL ACADEMIC RESOURCE

Academic Year & Term	2026-27 TERM 1
Class	VI
Subject	MATHS
Topic/Chapter	MIDTERM WORKSHEET
Section	MIDDLE
Date of Issue	SEPTEMBER 2026

CH.1 PATTERNS IN MATHEMATICS

I. CHOOSE THE CORRECT ANSWER:

1. The terms in the number sequence 38, 34, 30, 26, are generated by:

- a) Adding 4 to the next term
- b) Multiplying by 4 to get the next term
- c) Subtracting 4 to get the next term
- d) Dividing by 4 to get the next term

2. The sequence 1, 7, 19, 37,.... is called as

- a) Cubes b) Squares c) Triangle Numbers d) Hexagonal Numbers

3. Which number is missing in the pattern 110, 121, 133, ____, 160

- a) 145 b) 155 c) 160 d) 146

II. ASSERTION AND REASON QUESTIONS:

4. Assertion (A): The sequence 1, 3, 6, 10... is called Triangular numbers.

Reason (R): The sequence of 1, 2, 3, 4, 5 ... is called counting numbers.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true but R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

III. ANSWER THE FOLLOWING QUESTIONS

5. What is the pattern rule followed by the sequence 89, 79, 69, 59, 49, 39...
6. How many counters would come next?



7. Complete the pattern and find the pattern rule: 5, 9, 13, __, __
8. Alice used the rule 'double the number' to create the following pattern. 3, 6, 12, 24, __. Find the next two numbers.

IV. CASE STUDY

9. Bob, the builder is building a museum made of glass. He starts the construction by placing 1 glass block in the first row, 4 glass blocks in the second row, 9 glass blocks in the third row and so on.

Based on the above information, answer the following questions.

- i) If Bob continues the same pattern, then how many glass blocks will be in the 7th row?

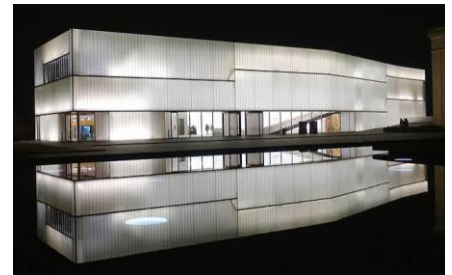
a) 18 b) 36 c) 27 d) 49

- ii) How many glass blocks are needed to construct the 9th row?

a) 100 b) 64 c) 81 d) 225

- iii) How many glass blocks are needed to construct the 15th row?

a) 225 b) 100 c) 625 d) 81



CH.2 LINES AND ANGLES

I. CHOOSE THE CORRECT ANSWER:

1. A ray divides a straight angle into two angles measuring 85° and _____. What is the missing angle?

a) 75° b) 85° c) 95° d) 100°

2. Which of the following names the vertex of $\angle ABC$?

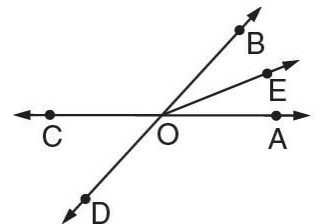
a) A b) B c) C d) None of these

3. Which of the following rays are the arms of $\angle BOA$?

a) OB, OE b) OE, OA c) OB, OA d) OC, OA

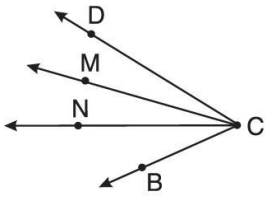
4. Which of the following pairs of times shows right angles?

a) 3:00, 9:00 b) 12:00, 6:00 c) 4:00, 7:30 d) 5:30, 10:00



II. ANSWER THE FOLLOWING QUESTIONS

1. Name the six angles in the given diagram that have C as a vertex.

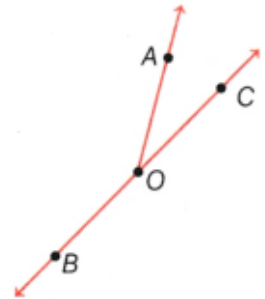


2. Three rays originate from a point forming three angles. If two of the angles measure 85° and 95° , find the third angle. Also state whether it is acute, right, obtuse, or straight.

3. The hands of a clock show 3 O'clock. Find the angle between the hands. Is it acute, right, obtuse, or straight?

4. Using the given figure answer the following

- a) Name the line containing the point ' C '
- b) Name of any two rays



III. CASE STUDY

1. Aryan is designing a bicycle for heavy-duty mountain trekking. To make the wheel strong enough to handle rocky paths, he chooses a wheel with **36 spokes**. In geometry, he learns that the center of the wheel acts as a vertex where all spokes meet, forming several small angles. For the wheel to be perfectly balanced, the spokes must be spaced equally.



- a) Find the measure of angle between adjacent spokes?
- b) What is the measure of largest acute angle formed between two spokes?
- c) What is the measure of total angle between the 1st and 10th spoke?

CH.3 NUMBER PLAY

I. CHOOSE THE CORRECT ANSWER:

1. Which of the following is a palindromic number?
a) 766 b) 212 c) 300 d) 157
2. How many times does the digit 5 appear when writing all the numbers from 1 to 100?
a) 10 b) 20 c) 25 d) 15
3. The largest 4-digit number, using any one digit twice, from digits 4, 7, 3 and 1 is
a) 7731 b) 74431 c) 7431 d) 7743
4. What is the difference between largest 4-digit number and smallest 2-digit number?
a) 9899 b) 8999 c) 9998 d) 9989

II. ASSERTION AND REASON QUESTIONS:

1. Assertion (A): Every 4-digit number with all digits equal does not reach 6174 by Kaprekar's process.

Reason (R): When all digits are equal, subtracting the largest and smallest numbers gives 0, so the process stops immediately.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true but R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

III. ANSWER THE FOLLOWING QUESTIONS

1. Find the smallest and largest 4-digit number whose digit sum is 9.
2. Identify all supercells in the table:

5500	5670	5340	5700	5450	5258	5764	5645	4500
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3. A smartwatch saves battery by lighting up only at palindromic times. Right now, it shows 05:50
How many minutes will pass before the screen lights up again?
4. List all 3-digit palindromes made from digits 4, 6, and 9 (repetition allowed).
5. Perform the Kaprekar process for 9013 until 6174 is reached. State all steps.

IV. CASE STUDY

1. Riya's Magical Discovery (Kaprekar Process).

Riya learned a fascinating number trick in class.

- Take any 4-digit number (with at least two different digits).
- Arrange the digits to form the largest number.
- Arrange the digits to form the smallest number.
- Subtract the smaller number from the larger number.
- Repeat the process.

2. She starts with the number 7642 and carefully follows the steps.

After repeating the process several times, she notices that she always reaches a special number called Kaprekar's constant.

- Arrange the digits of 7642 to form the smallest and largest numbers.
- Perform the process.
- Continue until you reach the final number. What is that number?
- How many steps did it take to reach this number?
- Try the same process with another number (e.g., 5321). Do you get the same result?
- Do you think this trick works for all 4-digit numbers? Give your opinion.



CH.4 DATA HANDLING AND PRESENTATION

I. CHOOSE THE CORRECT ANSWER:

1. Which of the following graphs uses pictures or symbols to represent data?

- a) Bar Graph b) Pictograph c) Line Graph d) Tally Chart

2. Which graph represents data using pictures?

- a) Bar Graph b) Pie Chart c) Pictograph d) Line Graph

3. Bars in a bar graph should always have:

- a) Different Widths b) Equal Spacing and equal width
c) Different colors only d) No spacing

4. In a pictograph, a symbol represents:

- a) Only one item b) Many items according to scale

c) No value

d) Random value

5. Which of the following helps in counting quickly?

a) Pictures

b) Tally marks

c) Colors

d) Shapes

II. ASSERTION AND REASON QUESTIONS:

1. **Assertion (A):** Pictographs are easy to understand at a glance.

Reason (R): They use pictures or symbols to represent data.

a) Both A and R are true and R is the correct explanation of A

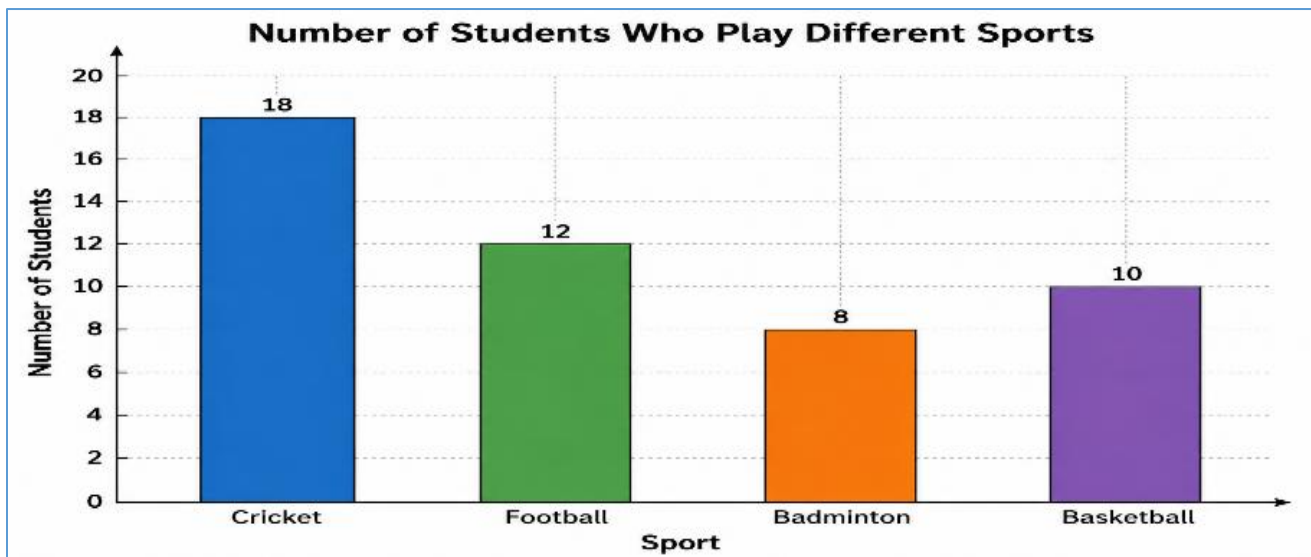
b) Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true

III. CASE STUDY

Favorite Sports - The following data shows the number of students who like different sports.



Answer the following:

1. Which sport is liked by the maximum number of students?
2. Which sport is liked by the minimum number of students?
3. How many students like Football and Basketball altogether?
4. How many more students like Cricket than Badminton?

IV. ANSWER THE FOLLOWING QUESTIONS

1. Draw tally marks for the following data.

Ice Cream	Students
Vanilla	7
Chocolate	9
Strawberry	5

2. Why do we use tally marks?

3. State two advantages of bar graphs.

4. If one symbol represents 4 flowers, how many flowers do 6 symbols represent?

CH.5 PRIME TIME

I. CHOOSE THE CORRECT ANSWER:

1. A teacher asks students to find a number that is a multiple of both 6 and 8. Which of the following numbers can they choose?

- a) 18 b) 24 c) 30 d) 40

2. A number has exactly two factors: 1 and itself. Which type of number is it?

- a) Composite Number b) Even Number c) Prime Number d) Multiple

3. Two bells ring together. One rings every 6 minutes and the other every 8 minutes. After how many minutes will they ring together again?

- a) 12 b) 18 c) 24 d) 48

4. Which pair is co-prime?

- a) 14 and 21 b) 18 and 27 c) 16 and 25 d) 24 and 36

6. A student writes: $45 = 3 \times 3 \times 5$. What does this tell us about 45?

- a) 45 is a prime number. b) 45 has only two factors.
c) 45 is a composite number. d) 45 has no prime factors.

7. Which statement about prime numbers is always true?

- (a) Every prime number is odd. (b) Every prime number has exactly two factors.
(c) Every odd number is prime. (d) Every composite number has exactly two factors.

II. ASSERTION AND REASON QUESTIONS:

1. Assertion (A): 29 is a prime number.

Reason (R): 29 has exactly two factors, 1 and 29.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true but R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

III. ANSWER THE FOLLOWING QUESTIONS

1. Test whether 4,536 is divisible by 8. Give the reason using the divisibility rule.
2. Express 540 as a product of prime numbers. Show the steps of breaking it into factors until only prime factors remain.
3. A school has to arrange students in equal groups. The total number of students must be divisible by both 6 and 8. Find the smallest 4-digit number of students that satisfies this condition. Show your method.

IV. CASE STUDY

4. For a festival decoration, a family labels five light strings with the numbers 24, 36, 45, 50 and 72.

- a) Which of these numbers are divisible by 5?
- b) Which of these numbers are divisible by 4?
- c) Write the prime factorization of 45.
- d) A family member says, “72 is divisible by 8.”
Do you agree? Use the divisibility rule to justify your answer.



NOTE: REFER TO TEXTBOOK AND ALL NOTES & WORKSHEETS OF TERM 1 DISCUSSED AND UPLOADED IN GOOGLE CLASSROOM