

## CHAPTER-1 | Patterns in Mathematics

QUIZ  
PART-02

1. What is the branch of mathematics that studies patterns in whole numbers called?
- A. Algebra  
B. Geometry  
C. Number Theory  
D. Trigonometry (C)

**Explanation:** The branch that studies patterns in whole numbers is called Number Theory.

2. Which of the following is an example of a number sequence?
- A. 2, 4, 8, 16, 32  
B. 1, 3, 5, 7, 9  
C. 1, 1, 1, 1, 1  
D. All of the above (D)

**Explanation:** All the sequences listed are number sequences, including powers of 2, odd numbers, and repeating ones.

3. What does the sequence 1, 3, 6, 10, 15 represent?
- A. Odd numbers  
B. Triangular numbers  
C. Even numbers  
D. Squares (B)

**Explanation:** This is an example of triangular numbers, where each number is the sum of the integers up to that point.

4. What is the sequence 1, 4, 9, 16, 25 an example of?
- A. Squares  
B. Cubes  
C. Triangular numbers  
D. Powers of 3 (A)

**Explanation:** The sequence represents square numbers, as each number is the square of a natural number.

5. Which of the following is NOT a type of number sequence?
- A. Powers of 2  
B. Triangular numbers  
C. Whole numbers  
D. Odd numbers (C)

**Explanation:** Whole numbers are not a specific sequence, but rather a set of numbers. The others are all specific number sequences.

6. In the sequence 1, 2, 3, 5, 8, 13, 21, what is this type of sequence called?
- A. Powers of 2  
B. Powers of 3  
C. Fibonacci sequence  
D. Triangular numbers (C)

**Explanation:** This sequence is the Fibonacci sequence, where each number is the sum of the two preceding ones.

7. Which of these is the first number in the sequence of even numbers?
- A. 0  
B. 1  
C. 2  
D. 3 (C)

**Explanation:** The sequence of even numbers starts with 2, which is the first even number.

8. What is the pattern in the sequence 1, 3, 9, 27, 81, 243?
- A. Powers of 2  
B. Powers of 3  
C. Fibonacci sequence  
D. Triangular numbers (B)

**Explanation:** This sequence follows the pattern of powers of 3. Each number is 3 raised to a successive power.

9. What does a "whole number" include?
- A. Only positive numbers  
B. Positive numbers and zero  
C. Negative numbers and zero  
D. Only even numbers (B)

**Explanation:** Whole numbers include all positive numbers and zero.

10. The pattern 1, 2, 3, 4, 5, 6, ... is an example of:
- A. Odd numbers  
B. Whole numbers  
C. Natural numbers  
D. Even numbers (C)

**Explanation:** This is an example of natural numbers, which start from 1 and increase by 1 each time.