

CHAPTER-1 | Patterns in Mathematics

QUIZ
PART-06

1. What is the term for the sequence 1, 2, 3, 4, 5?
A. Even numbers
B. Counting numbers
C. Odd numbers
D. Square numbers (B)

Explanation: The sequence 1, 2, 3, 4, 5 is an example of counting numbers, which start from 1 and continue by 1.

2. The sequence 1, 3, 5, 7, 9 is an example of:
A. Odd numbers
B. Even numbers
C. Triangular numbers
D. Powers of 2 (A)

Explanation: This is a sequence of odd numbers, where each number is not divisible by 2.

3. The sequence 1, 4, 9, 16, 25 represents:
A. Powers of 2
B. Cube numbers
C. Square numbers
D. Triangular numbers (C)

Explanation: This is a sequence of square numbers, where each number is the square of an integer.

4. Which sequence is represented by the numbers: 1, 3, 6, 10, 15?
A. Powers of 2
B. Triangular numbers
C. Odd numbers
D. Fibonacci sequence (B)

Explanation: The sequence 1, 3, 6, 10, 15 represents triangular numbers, where each number is the sum of all the previous natural numbers.

5. The sequence 1, 8, 27, 64, 125 represents:
A. Triangular numbers
B. Cube numbers
C. Fibonacci sequence
D. Powers of 3 (B)

Explanation: This is the sequence of cube numbers, where each number is the cube of an integer ($1^3, 2^3, 3^3$).

6. What do the numbers 1, 2, 4, 8, 16 represent?
A. Fibonacci numbers
B. Powers of 2
C. Odd numbers
D. Triangular numbers (B)

Explanation: The sequence 1, 2, 4, 8, 16 represents powers of 2, where each number is double the previous one.

7. The sequence 1, 7, 19, 37, 61 is known as:
A. Fibonacci sequence
B. Hexagonal numbers
C. Square numbers
D. Triangular numbers (B)

Explanation: The sequence 1, 7, 19, 37, 61 is called hexagonal numbers, and it is represented as dots forming hexagonal patterns.

8. The sequence 1, 3, 9, 27, 81 represents:
A. Powers of 2
B. Powers of 3
C. Triangular numbers
D. Fibonacci sequence (B)

Explanation: The sequence 1, 3, 9, 27, 81 represents powers of 3, where each number is 3 raised to a successive power.

9. In which sequence can numbers be arranged both as triangles and squares?
A. Cube numbers
B. Triangular numbers
C. Square numbers
D. Powers of 2 (B)

Explanation: 36 is an example of a number that can be arranged both as a triangle and a square, making it a special number in triangular numbers.

10. What is the next number in the hexagonal sequence: 1, 7, 19, 37?
A. 49
B. 61
C. 45
D. 56 (B)

Explanation: The next number in the hexagonal sequence is 61, as shown in the pattern of the previous numbers.