Introduction to Patterns in Mathematics

A. Choose the Correct Answer:

1. What is the next number in the pattern 3, 6, 9, 12, __?

a)14	b) 15
a)14	0) 13

- c) 18 d) 21
- 2. The pattern 2, 5, 10, 17, __ follows the rule n² + 1. What is the next number?
 a) 25
 b) 26
 - c) 28 d) 30

B. Write the Missing Terms to Complete the Sentences:

- 1. The sequence 2, 4, 6, 8, 10, ___, ___ follows the pattern of adding ____ to each term.
- 2. The pattern A, C, E, G, ___, ___ follows the rule of skipping one letter. The missing letters are ____ and ____.
- 3. In a triangular number pattern, the first five triangular numbers are 1, 3, 6, 10, ____.
- 4. The general form of an even number pattern is given by the formula 2n, where n is a _____ number.
- 5. If a pattern follows the rule Multiply by 2, then the next number after 3, 6, 12, 24 will be ____.

C. Mark each sentence with a True (\checkmark) or False (X):

- 1. The pattern 5, 10, 20, 40, 80 follows the rule Add 5 each time.
- 2. The number pattern 1, 4, 9, 16, 25 represents square numbers.
- 3. The sequence 100, 95, 90, 85, 80 is decreasing by 10.
- 4. The Fibonacci sequence starts with 1, 2, 3, 5, 8, 13.
- 5. The pattern Z, Y, X, W, V, U follows the rule of moving backward in the alphabet.

D. Find the Missing Term:

- 1. Identify the missing number: 1, 4, 9, 16, ___, 36
- 2. Fill in the missing term: 2, 6, __, 24, 32, 42
- 3. Find the rule of the pattern: 5, 10, 20, 40, 80

4. What is the pattern followed in the sequence A, C, F, J, O, __?

E. Challenge yourself with these questions

- 1. Riya is arranging chairs in rows following this pattern: 2, 4, 8, 16. How many chairs will be there in the 5th row?
- 2. A tile pattern is made using squares. The first tile has 1 square, the second tile has 4 squares, the third tile has 9 squares, and the fourth tile has 16 squares. How many squares will the 5th tile have?
- 3. A book has page numbers arranged in an increasing pattern: 1, 3, 6, 10, 15, ___. What will be the next page number?
- 4. Complete the letter pattern: A, B, C, E, F, G, I, J, K, __, __