Playing with Number Patterns

A. Choose the Correct Answer:

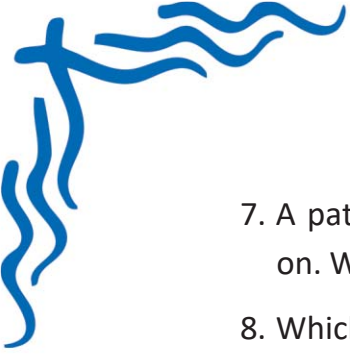1. **Which number comes next in the pattern: 2, 4, 8, 16, ___?**
   a) 18   b) 24
   c) 32   d) 30

2. **What is the rule in the pattern: 5, 10, 20, 40, ___?**
   a) Multiply by 2   b) Add 5
   c) Multiply by 5   d) Add 10

3. **What number should replace the question mark in the sequence: 81, 27, 9, 3, ___?**
   a) 1   b) 0
   c) 2   d) 6

B. Write the Missing Terms to Complete the Sentences:

1. The next number in the pattern 7, 14, 21, ___, ___ is _____ and _____.

2. In the sequence 1, 3, 6, 10, 15, ___, the pattern is formed by adding _____ numbers.

3. A pattern where each number is twice the previous number is called a _____ pattern.

4. The pattern 1, 4, 9, 16, ___, ___ is formed by _____ numbers.

5. A triangle number pattern starts as 1, 3, 6, 10, and its 6th number is _____.

C. Figure out the answers to these questions:

1. **Observe the pattern and write the next four terms:** 100, 90, 81, 73, ___, ___, ___, ___

2. Write a pattern using the rule: "Start from 2 and multiply by 3 each time." Write first 5 terms.

3. What will be the 10th number in the pattern: 3, 6, 9, 12...?

4. Draw a number pyramid with 4 levels where each number is the sum of the two numbers below it.

5. If the pattern of numbers is 2, 4, 6, 8, find the sum of the first 10 terms.

6. Create your own pattern using subtraction and write at least 6 numbers in the sequence.

7. A pattern follows this logic: Add 2, then subtract 1, add 2, subtract 1, and so on. Write the first 8 terms starting from 5.

8. Which number does not belong in the pattern: 3, 6, 9, 11, 12, 15? Explain why.

D. Mark each sentence with a True (✓) or False (✗):

1. The pattern 1, 2, 4, 8, 16 is a multiplication pattern.

2. All odd numbers make an increasing pattern with difference 3.

3. A square number pattern includes 1, 4, 9, 16, 25.

4. In a decreasing pattern, the numbers always get divided.

5. The pattern 100, 90, 80, 70 is formed by subtracting 10.

E. Challenge yourself with these questions:

1. Write the pattern of first five even numbers and find their total sum.

2. Create a secret code using a number pattern and write the rule.

3. Find the pattern hidden in the letters A1, B2, C3, D4… and continue it till H.

4. Write any 3 daily life examples where number patterns are seen.

5. Find the missing term in the pattern: 2, 3, 5, 8, 12, ___, 23.