NUMBER SERIES

A number series is a sequence of numbers that follows a specific pattern or rule. The goal is to identify that pattern.

COMMON PATTERNS

— 1. Arithmetic series:
The difference between consecutive terms is constant (e.g. 2, 4, 6, 8, ...)

— 2. Geometric series
Each term is multiplied by a constant term to get the next term. (e.g. 3, 6, 12, 24,)

— 3. square numbers
Each term is a perfect square.
(e.g. 1, 4, 9, 16)

— 4. Fibonacci series.
Each term is the sum of preceding terms (e.g. 0, 1, 1, 2, 3, 5, ...)

PROBLEMS

1) Find the next no. : 3, 6, 9, 12, ?
Next number is 15. ($+3$) → logic

2) Identify the missing number: 2, 5, 10, ?, 26
no. missing is 17.

logic $(1^2 + 1)$, $(2^2 + 1)$, $(3^2 + 1)$, $(4^2 + 1)$, $(5^2 + 1)$

ALPHA SERIES

An alphabet series involves a sequence of letters that follows a specific pattern or rule, often based on the position of letters in the alphabet.

COMMON PATTERNS

— 1. Sequential series.

Letters in a consecutive sequence (e.g. A, B, C, D)

— 2. Reverse Order.

Letters in reverse (e.g. Z, Y, X, ...)

— 3. Skip patterns

Skipping one or more letters (e.g. , A, C, E, G, ..)

PROBLEMS

1) Find the missing letter : A, C, E, ?, I

missing letter is G. [skips one letter] - logic

2) Identify the sequence : B, D, F, H, ?

Next letter is I [odd - positioned letters] - logic

3) A, D, G, J, ?

Next letter is M

4) Z, X, V, T, ?

Next letter is R.

Number series problems

1. Find the next number : 2, 6, 12, 20, ?

2. Identify the missing number : 5, 11, 17, ?, 29

3. Complete the series : 1, 2, 4, 8, 16, ?, 64

Alphabet series problems.

1. Find the missing letters : A, C, E, G, I, ?

2. Identify the sequence : M, N, P, S, ?

ANSWER : (Number series)

Number series problems

1. Find the next number : 2, 6, 12, 20, ?

2. Identify the missing number : 5, 11, 17, ?, 29

3. Complete the series : 1, 2, 4, 8, 16, ?, 64

Alphabet series problems.

1. Find the missing letters : A, C, E, G, I, ?

2. Identify the sequence : M, N, P, S, ?

ANSWER: (Number series)

— 1) 2, 6, 12, 20, ?

⟹ $\boxed{36}$

logic

$(1 \times 2), (2 \times 3), (3 \times 4), (4 \times 5), (5 \times 6)$

— 2) 5, 11, 17, ?, 29

⟹ $\boxed{23}$

logic

$((5 \times 1) + 0), ((5 \times 2) + 1), ((5 \times 3) + 2), ((5 \times 4) + 3), ((5 \times 5) + 4)$

— 3) 1, 2, 4, 8, 16, ?, 64

⟹ $\boxed{32}$

logic

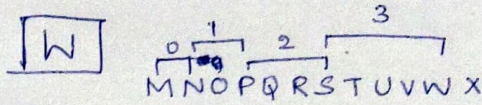$(1), (1 \times 2), (2 \times 2), (4 \times 2), (8 \times 2), (16 \times 2), (32 \times 2)$

ANSWER (alpha series)

—1) A, C, E, G, I, ?

$\boxed{k}$

logic → skip a letter.

—2) M, N, P, S, ?

$\boxed{W}$

M N O P Q R S T U V W X
with brackets labeled 0, 1, 2, 3

logic → M+0, N+1, P+2, S+3, W

→ skip letters on (+1) pattern for each
letter starting from 0.