

INTERNATIONAL INDIAN SCHOOL BURAI DAH

Worksheet 2026-27

CLASS: XI

SUBJECT: MATHEMATICS

Chapter No:8 – Sequence And Series

MCQ:

1- If n th term of a GP is 2^n , then find the sum of its first 6 terms.

- (a) 126 (b) 124 (c) 190 (d) 154

2- If the 5th term of GP is 2, then the product of first 9 terms is :

- (a) 64 (b) 512 (c) 128 (d) 256

3- The first three term of a GP are $m-1$, $m+1$, $m+7$, Find the value of m

- (a) 7 (b) 5 (c) 6 (d) 3

4- If n th term of an AP is $3n-4$ find the 10th term of an AP

- (a) 10 (b) 12 (c) 22 (d) 26

5- The sum of AP 2, 5, 8 upto 50 terms is

- (a) 3775 (b) 3557 (c) 3757 (d) 3575

Subjective Questions:

1- If in a GP, $a_3 + a_5 = 90$ and if $r = 2$, find first term of the GP.

2- Which term of the GP $2, 1, \frac{1}{2}, \frac{1}{4}, \dots$ is $\frac{1}{1024}$?

3- If the product of 3 consecutive terms of GP is 27, Find the middle term.

4- If a, b, c are in GP then show that $b^2 = ac$

5- The first term of a GP is 2 and sum to infinity is 6, find the common ratio.

6- In a GP, the 3rd term is 24 and 6th term is 192. Find the 10th term

7- If a, b, c are in GP, then show that $a^2 + b^2, ab + bc$ are also in GP.

8- If the continued product of three numbers in GP is 216 and the sum of their products in pair is 156, find

numbers .

9 If $A = 1 + r^a + r^{2a} + \dots \dots \infty$ then express r in terms of ' a ' and ' A '

10- The sum of first three terms of GP is 15 and the sum of next three terms is 120. Find the sum of first n terms .

11- Find the sum of the series up to n term $1 + (1+x) + (1+x+x^2) + (1+x+x^2+x^3) + \dots \dots$ upto n term .

12- Find the two positive numbers whose difference is 12 and whose arithmetic mean exceeds the geometric mean by 2.

13- If a is AM of b and c and the two geometric means are G_1 and G_2 , then prove that $G_1^3 + G_2^3 = 2abc$.

14- The sum of an infinite GP is 57 and sum of the cubes of its terms is 9747, find the GP.

15 Three positive numbers form an increasing GP. If the middle term in the GP is doubled, the new numbers are in AP, the common ratio of the GP.

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