

CHAPTER 9 - SEQUENCES AND SERIES

Focus Area Based questions

1. How many terms of the GP, $3, \frac{3}{2}, \frac{3}{4}, \dots$ are needed to give the sum $\frac{3069}{512}$?
2. Find the sum to n terms of the sequence $4 + 44 + 444 + \dots$
3. The common ratio of the GP $\frac{5}{2}, \frac{5}{4}, \frac{5}{8}, \dots$ is
4. Find the sum of n terms of the series $8 + 88 + 888 + \dots$
5. Calculate : $0.6 + 0.66 + 0.666 + \dots$ n terms
6. Insert three numbers between 1 and 256 so that the resulting sequence is a G.P.
7. The sum of first 3 terms of a Geometric progression is $\frac{39}{10}$ and their product is 1. Find the term
8. Find the sum of first 10 terms of a G.P, whose 3rd term is 12 and 8th term is 384.
9. If 3rd, 8th and 13th terms of a G.P. are x, y, z respectively, prove that x, y, z are in G.P.
10. Find the 10th term of a G.P., whose 3rd term is 24 and 6th term is 192.
11. Find the value of x in which the number $\frac{-2}{7}, x, \frac{-7}{2}$ are in G.P
12. How many terms of G.P $3, 3^2, 3^3, \dots$ Are needed to give the sum 120?
13. Find a G.P for which sum of the first two terms is - 4 and the fifth term is 4 times the third term.

MATHEMATICS MADE EASY BY MARY M J

14. If the p^{th} , q^{th} , and r^{th} terms of a G.P are a , b , c respectively.

Prove that $a^{q-r} b^{r-p} c^{p-q} = 1$.

15. Insert two numbers between 3 and 81 so that the resulting sequence is G.P.

SEQUENCES & SERIES FOCUS AREA VIDEO LINK :

<https://youtu.be/MCgtAXHaf7E>