

Year 12 Series & Sequences Worksheet



1. If the first and fourth terms of a series in an arithmetic progression are 11 and 32 respectively. Find the common difference.
2. Find the sum of the infinitely decreasing geometric progression: 1, $1/2$, $1/4$, $1/8$,.....
3. Find the sum of the first 1000 natural numbers.
4. If the sum of first p terms of an A.P., is $ap^2 + bp$, find its common difference.
5. In an A.P., first term is 2, the last term is 29 and sum of the terms is 155. Find the common difference of the A.P.
6. In an A.P., the sum of first ten terms is -150 and the sum of its next ten terms is -550 . Find the A.P.
7. For what value of p , are $2p - 1$, 7 and $3p$ three consecutive terms of an A.P.?
8. If S_n , the sum of first n terms of an A.P. is given by $S_n = 3n^2 - 4n$, then find its n th term.
9. Find the fifth term of the progression 3, 9, 27, 81.
10. The sum of 4th and 8th terms of an A.P. is 24 and sum of 6th and 10th terms is 44. Find the A.P.