

Chapter-5 Arithmetic Progressions

Section A (1 mark each)

1. The 20th term of an A.P. exceeds its 15th term by 10. Find the common difference.
2. Which term of the A.P: 24, 21, 18...is - 84?
3. Two APs have the same common difference. The difference between their 50th terms is 309, what is the difference between their 400 terms?

Section B (2 marks each)

4. How many three digit numbers are divisible by 11?
5. Is 307 a term of the sequence 17, 23, 29, 35 ...
6. Find the sum of first 500 odd positive integers. Also find the sum of first r odd positive integers.
7. Find the 30th term from the last term of the A. P. 4, 8, 12, ... , 444.
8. Derive a formula to find sum of n terms of A.P. $a, a + d, a + 2d, \dots$

Section C (3 marks each)

9. Find the sum of the first 50 positive integers which leave remainder 3 when divided by 5
10. 610 logs are stacked in the following manner: 40 logs in the bottom row, 39 in the next row, 38 in the row next to it and so on. In how many rows are the 610 logs placed and how many logs are in the top row?
11. A sum of 2750 is to be used to give ten cash prizes to students of a school for their over all academic performance. If each prize is Rs. 50 less than its preceding prize, Find the value of each of the prize.
12. If the sum of the first n terms of an AP is $4n - n^2$, what is the first term
What is the second term? Similarly, find the 5th, the 9th and the p th term.

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