

# CHAPTER-5 | Arithmetic Progressions

## QUIZ PART-12

1. How many terms of the A.P. 9, 17, 25,... must be taken to give a sum of 636?

- A. 10  
B. 12  
C. 14  
D. 16 (C)

*Explanation:* Using the sum formula, 14 terms are required to give a sum of 636.

2. The first term of an A.P. is 5, the last term is 45, and the sum is 400. Find the number of terms and the common difference.

- A. 15 terms, common difference = 3  
B. 18 terms, common difference = 2  
C. 16 terms, common difference = 2  
D. 14 terms, common difference = 3 (A)

*Explanation:* The number of terms is 15, and the common difference is 3.

3. The first and last terms of an A.P. are 17 and 350 respectively. If the common difference is 9, how many terms are there and what is their sum?

- A. 36 terms, sum = 6660  
B. 37 terms, sum = 6800  
C. 38 terms, sum = 6900  
D. 35 terms, sum = 6600 (B)

*Explanation:* The number of terms is 37, and the sum is 6800.

4. Find the sum of the first 22 terms of an A.P. where  $d=7$  and the 22nd term is 149.

- A. 1770  
B. 1800  
C. 1850  
D. 1900 (A)

*Explanation:* The sum of the first 22 terms is 1770.

5. Find the sum of the first 51 terms of an A.P. where the second and third terms are 14 and 18 respectively.

- A. 3585  
B. 3650  
C. 3700  
D. 3750 (A)

*Explanation:* The sum of the first 51 terms is 3585.

6. If the sum of the first 7 terms of an A.P. is 49 and the sum of the first 17 terms is 289, find the sum of the first  $n$  terms.

- A. 490  
B. 500  
C. 510  
D. 520 (B)

*Explanation:* The sum of the first  $n$  terms is 500.

7. How many terms of the A.P. 6, 11, 16,... are required to give a sum of 300?

- A. 10  
B. 12  
C. 14  
D. 16 (B)

*Explanation:* 12 terms are required to give a sum of 300.

8. If the first term of an A.P. is 8 and the common difference is 5, what is the 20th term?

- A. 103  
B. 104  
C. 105  
D. 106 (C)

*Explanation:* The 20th term is 105.

9. Find the sum of the first 15 terms of the A.P. 2, 5, 8,...

- A. 330  
B. 350  
C. 375  
D. 390 (B)

*Explanation:* The sum of the first 15 terms is 350.

10. The sum of the first  $n$  terms of an A.P. is given by  $S_n = 10n$ . What is the common difference?

- A. 5  
B. 6  
C. 7  
D. 10 (A)

*Explanation:* The common difference is 5.