

# ONLINE MATHS CLASS - X - 10 ( 12 / 07 /2021 )

## 1. ARITHMETIC SEQUENCE - CLASS 8 – WORK SHEET

### Important points .

- If the first term of an arithmetic sequence is  $f$  and its common difference is  $d$  ,  
then its  $n^{\text{th}}$  term is  $d n + f - d$  .
- If  $n$  is an odd number , then the sum of  $n$  consecutive terms of an arithmetic  
sequence =  $n \times$  middle term .

1. Consecutive terms of some arithmetic sequences are given in the table below . Complete the table .

Terms	Number of terms	Position of the middle term	Middle term	Sum of the terms
2 , 5 , 8	3	2	5	$3 \times 5 = 15$
5 , 9 , 13 , 17 , 21				
3 , 8 , 13 , 18 , 23 , 28 , 33				
4 , 10 , 16 , 22 , 28 , 34 , 40 , 46 , 52				
10 , 15 , 20 , 25 , 30 , 35 , 40 , 45 , 50 , 55 , 60				

2. Consider the arithmetic sequence 5 , 8 , 11 , . . .

- What is its common difference ?
- What is its 6<sup>th</sup> term ?
- Find the sum of first 11 terms of this sequence .

3. Consider the arithmetic sequence 7 , 12 , 17 , . . .
- What is its common difference ?
  - What is its 10<sup>th</sup> term ?
  - Find the sum of first 19 terms of this sequence .
4. The sum of first 9 terms of an arithmetic sequence is 189 and its common difference is 4
- What is its fifth term ?
  - What is its first term ?
  - Find the algebraic form of this sequence .
5. The sum of first 7 terms of an arithmetic sequence is 63 and its fifth term is 11 .
- What is its fourth term ?
  - What is its common difference ?
  - What is its eighth term ?
6. The sum of first 3 terms of an arithmetic sequence is 39 and the sum of first 5 terms is 95 .
- What is its second term ?
  - What is its third term ?
  - What is its common difference ?
  - Find the algebraic form of this sequence .