

**THIRUVANANTHAPURAM EDUCATIONAL DISTRICT**  
**MATHEMATICS -UNIT 1**  
**Standard X**

WS2MT  
101 E



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1. Consider the sequence 0,3,8,15,..... terms are 1 less than the perfect squares in the order
    - (a) Write the next term.
    - (b) What is the 10<sup>th</sup> term.
    - (c) What is the largest two digit term of the sequence.
  
  2. a). What is the common difference of the arithmetic sequence 70,77,84,.....
    - (b) What is the difference between the 10<sup>th</sup> and 20<sup>th</sup> term of this sequence.
    - (c) Write two terms of this sequence such that one term is twice the other.
  
  3. If 8<sup>th</sup> and 10<sup>th</sup> terms of an arithmetic sequence are 36 and 28. Find its
    - (a) Common difference.
    - (b) First term.
    - (c) n<sup>th</sup> term.
    - (d) 11<sup>th</sup> term.
  
  4. Consider the arithmetic sequence 4,9,14,19,.....
    - (a) What is the common difference.
    - (b) Write the next two terms of the sequence.
    - (c) Find the algebraic expression of the sequence.
  
  5. The n<sup>th</sup> term of an arithmetic sequence is  $8n+3$ .
    - (a) Find the common difference.
    - (b) Write the arithmetic sequence.
    - (c) Write the remainder got when the terms are divided by 8.
    - (d) How many terms of this sequence lie between 200 and 400.

6. The sum of first three consecutive terms of an arithmetic sequence is 36.

- (a) Find the middle term.
- (b) If the common difference of the sequence is 2, write the sequence.



7. The sum of first 9 terms of an arithmetic sequence is 45 and the sum of first 18 terms is 171.

- (a) Find the 5<sup>th</sup> term.
- (b) What is the sum of its 10<sup>th</sup> term to 18<sup>th</sup> term.
- (c) What is its 14<sup>th</sup> term.

8. 6, 12, 18... is an arithmetic sequence,

- (a) Find the 20<sup>th</sup> term of the sequence.
- (b) Find the sum of first 20 terms of the sequence.
- (c) Find the sum of the first 20 terms of the sequence 7, 13, 19....

9. An algebraic form of sum to n<sup>th</sup> terms of an arithmetic sequence is  $3n^2 + n$ .

- (a) Find the first term of the sequence.
- (b) Find the common difference.
- (c) Write the arithmetic sequence.
- (d) Find the expression for n<sup>th</sup> term of the sequence.

10. Find the sum of the followings

- a)  $1 + 2 + 3 + \dots + 30$ .
- b)  $3 + 6 + 9 + \dots + 30$ .
- c)  $5 + 8 + 11 + \dots + 32$ .
- d)  $2 + 5 + 8 + \dots + 29$ .

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