CHAPTER – 5
ARITHMATIC PROGRESSIONS

5.1 INTRODUCTION

PROGRESSIONS:

Those sequence whose terms follow certain patterns are called progression. Generally there are three types of progression.

(i) Arithmetic Progression **(A.P.).** **(ii)** Geometric Progression **(G.P.)**

(iii) Harmonic Progression **(H.P.)**

ARTHMETIC PROGRESSION:

A sequence is called an **A.P.,** if the difference of a term and the previous term is always same. **i.e. $d = t_{n+1} - t_n$ = Constant** for all $n \in N$. The constant difference, generally denoted by **'d'** is called the common difference.

Ex.1 Find the common difference of the following A.P. : 1,4,7,10,13,16 .....

Sol. 4 - 1 = 7 - 4 = 10 - 7 = 13 - 10 = 16 - 13 = 3 (constant).

$\therefore$ Common difference (d) = 3.