CHAPTER – 5

ARITHMETIC PROGRESSION

S.no	Terms	Descriptions
1	Arithmetic Progression	An arithmetic progression is a sequence of numbers such that the difference of any two successive members is a constant Examples 1) 1,5,9,13,17.... 2) 1,2,3,4,5,...
2	common difference of the AP	the difference between any successive members is a constant and it is called the common difference of AP 1) If a_1, a_2, a_3, a_4, a_5 are the terms in AP then $D=a_2 - a_1 = a_3 - a_2 = a_4 - a_3 = a_5 - a_4$ 2) We can represent the general form of AP in the form a,a+d,a+2d,a+3d,a+4d..... Where a is first term and d is the common difference
3	nth term of Arithmetic Progression	n^{th} term = a + (n - 1)d
4	Sum of nth item in Arithmetic Progression	$S_n = (n/2)[a + (n-1)d]$ Or $S_n = (n/2)[t_1 + t_n]$