	BCM SCHOOL BASANT AVENUE DUGRI LUDHIANA
	CLASS XI SC SEQUENCES AND SERIES
1	Find the sum of the series $(3^3 - 2^3) + (5^3 - 4^3) + (7^3 - 6^3) + \dots$ to (i) n terms (ii) 10 terms
2	If x, 2y and 3z are in A.P. where the distinct numbers x, y and z are in G.P., then the common ratio of the G.P.
3	If t_n denotes the nth term of the series 2 + 3+ 6+11 + 18+…, then t_{50}
4	The lengths of three unequal edges of a rectangular solid block are in G.P. If the volume of the block is 216 cm^3 and the total surface area is 252 cm^2, then the length of the longest edge.
5	Prove that $1^2 + 2^2 + 3^2 + \dots\dots\dots\dots\dots\dots\dots\dots +n^2 = \frac{n(n+1)(2n+1)}{6}$
6	Prove that $1^3 + 2^3 + 3^3 + \dots\dots\dots\dots\dots\dots\dots +n^3 = \left(\frac{n(n+1)}{2}\right)^2$
7	Find the sum to n terms of the series $1^2 + (1^2 + (1^2 + 2^2) + (1^2 + 2^2 + 3^2) + \text{------}$
8	The ratio of A M and G. M of two positive numbers. a and b are m: n show that a: b = $(m + \sqrt{m^2 - n^2}) : (m - \sqrt{m^2 - n^2})$
9	If the pth and qth terms of a G.P. are q and p respectively, then show that its $(p + q)$th term is $\left(\dfrac{q^p}{p^q}\right)^{\frac{1}{p-q}}$.