## 1996 5 (a) The first two terms of an arithmetic series are given as 2 + 8 +..... Find (i) *d*, the common difference (ii) $T_{10}$ , the tenth term (iii) the value of *n* such that $T_n = 200$ (iv) $S_{16}$ , the sum to 16 terms. (b) The *n*th term, $T_n$ , of a geometric series is $T_n = 3^{n-1}.$ Find (i) $T_1$ , the first term (ii) r, the common ratio (iii) $S_n$ , the sum to *n* terms. Investigate if $2S_n - T_n = 2T_n - 1.$

Answers					
5	(a) (i) 6	(ii) 56	(iii) 34	(iv) 752	
	(b) (i) 1	(ii) $r = 3$	(iii) Yes		

## SEQUENCES & SERIES (Q 5, PAPER 1)