

1. For what value of  $k$  will  $(k+9)$ ,  $(2k-1)$  and  $(2k+7)$  be consecutive terms of an A.P.?
2. The sums of the first  $n$  terms of three arithmetic progressions are  $S_0, S_2$  and  $S_3$  respectively. The first term of each A.P. is 1 and their common differences are 1, 2 and 3 respectively. Prove that  $S_1 + S_3 = 2S_2$ .