

6 (a) Show that $\sum_{r=1}^n (4r - 3) = n(2n - 1)$

(3)

(b) Hence, or otherwise, find the least value of n such that $\sum_{r=1}^n (4r - 3) > 1000$

(3)

Given that $S_n = n(2n - 1)$, $t_n = (4n - 3)$ and that $18 + 3t_{n+7} = S_{n+4}$

(c) find the value of n .

(4)

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(Total for Question 6 is 10 marks)

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