

5 (a) Show that  $\sum_{r=1}^n (3r + 5) = \frac{1}{2}n(3n + 13)$  (3)

(b) Hence evaluate  $\sum_{r=35}^{50} (3r + 5)$  (2)

Given that  $\sum_{r=1}^n (3r + 5) = 385$

(c) find the value of  $n$ . (3)

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**(Total for Question 5 is 8 marks)**

