6 The sum of the first n terms of an arithmetic series is S_n where $S_n = n(3 + 2n)$

(a) Find the value of S_{20}

(2)

Given that $S_n = \sum_{r=1}^{n} (Ar + B)$

(b) find the value of A and the value of B

(6)

A different arithmetic series has first term 7 and common difference 4

The sum of the first n terms of this series is T_n

(c) Use algebra to find the value of n for which $T_n = S_n + 252$

(5)

Question 6 continued

Question 6 continued

Question 6 continued

(Total for Question 6 is 13 marks)