6 An arithmetic series A has first term a and common difference d.

The sum S_n of the first n terms of A is given by $S_n = n(15 + 2n)$

(a) Find the value of a and the value of d.

(4)

(b) Find the 20th term of A.

(2)

Given that $S_{2p} - 2S_p = 1 + S_{(p-1)}$

(c) find the value of p.

(4)

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Question 6 continued

(Total for Question 6 is 10 marks)

P 6 2 2 8 0 A 0 1 3 3 2