

3 A geometric series has first term  $(11x - 3)$ , second term  $(5x + 3)$  and third term  $(3x - 3)$ .

(a) Find the two possible values of  $x$ .

(4)

For each of your values of  $x$ ,

(b) find the corresponding value of the common ratio of the series.

(3)

Given that the series is convergent,

(c) find the sum to infinity of the series.

(3)

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**Question 3 continued**

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**(Total for Question 3 is 10 marks)**