8 The sum of the first and third terms of a geometric series is 100

The sum of the second and third terms is 60

(a) Find the two possible values of the common ratio of the series.

(5)

Given that the series is convergent, find

(b) the first term of the series,

(2)

(c) the least number of terms for which the sum is greater than 159.9

(4)

Question 8 continued

Question 8 continued

Question 8 continued

(Total for Question 8 is 11 marks)