

- 6 The sum of the first term and the third term of a geometric series is 250

The sum of the second term and the third term of the series is 150

The common ratio of the series is  $r$ .

- (a) Find the two possible values of  $r$ .

(5)

The sum of the first  $n$  terms of the series is  $S_n$

Given that  $r > 0$  and that  $S_n > 399.99$

- (b) find the least value of  $n$ .

(6)

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**Question 6 continued**

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Question 6 continued

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**(Total for Question 6 is 11 marks)**

