

3 A geometric series G has first term a and common ratio r

The 2nd term of G is $\frac{5}{16}$ and the 5th term of G is $\frac{135}{1024}$

(a) Find

(i) the value of r

(ii) the value of a

(5)

Given that G is convergent with sum to infinity S

(b) find the exact value of S

(2)

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Question 3 continued

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(Total for Question 3 is 7 marks)

