Unit 6: Series

Subunit 6.4: Sum to infinity of a geometric progression

Topical Question No: 1

8 A geometric progression is such that its second term is -120 and its sum to infinity is 160.

(a) Find the common ratio. [4]

(b) The first nine terms of the progression are now removed.

Find the sum to infinity of the remaining terms of the progression. [3]

Topical Question No: 2

5 The fifth, sixth and seventh terms of a geometric progression are $8k$, -12 and $2k$ respectively.

Given that k is negative, find the sum to infinity of the progression. [4]

Topical Question No: 3

2 The second and third terms of a geometric progression are 10 and 8 respectively.

Find the sum to infinity. [4]