13 (a) The sum of the first two terms of a geometric progression is 10 and the third term is 9.

(i) Find the possible values of the common ratio and the first term. [5]

(ii) Find the sum to infinity of the convergent progression. [1]

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(b) In an arithmetic progression, $u_1 = -10$ and $u_4 = 14$. Find $u_{100} + u_{101} + u_{102} + \ldots + u_{200}$, the sum of the 100th to the 200th terms of the progression. [4]

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