

- 5** **(a)** The first and second terms of an arithmetic progression are 161 and 154 respectively. The sum of the first m terms is zero. Find the value of m . [3]
- (b)** A geometric progression, in which all the terms are positive, has common ratio r . The sum of the first n terms is less than 90% of the sum to infinity. Show that $r^n > 0.1$. [3]