

- 6** **(a)** The sixth term of an arithmetic progression is 23 and the sum of the first ten terms is 200. Find the seventh term. [4]
- (b)** A geometric progression has first term 1 and common ratio r . A second geometric progression has first term 4 and common ratio $\frac{1}{4}r$. The two progressions have the same sum to infinity, S . Find the values of r and S . [3]