

STEP II, 2012, Q8 EC

Q8 Well over a half of all candidates attempted this question but, on average, it proved to be the least well scoring. The initial inequality was usually well handled, but most of the remaining parts of the question were poorly handled in very circuitous ways, with few candidates being very clear in either what they were trying to prove or how. The first, given, result simply follows from equating for q^2 in two successive cases of the given recurrence definition. This result was then supposed to help with the following result, but almost no-one seemed to realise this, and attempts at inductive proofs were quite common at this stage (usually unsuccessfully). Candidates' confidence had clearly ebbed away well before the final part of the question, and so there were very few attempts at the two cases of the final paragraph.



NextStepMaths.com

To view mark schemes, fully worked solutions and examiner's comments, and for more details about tutoring and other services offered, go to [NextStepMaths.com](https://www.NextStepMaths.com)