STEP III 2016 Question 8 — Examiner Report

Attempted by nearly as many as attempted question 1, it was marginally more successful, and a good number achieved full marks. Generally, the idea of repeatedly applying a function to create a cycle was well-spotted. However, candidates did sometimes fall down trying to find $g(x)$ in (ii) and some substituted the given $g(x)$ rather than finding it. In part (iii), some stopped having made the first substitution and so could not find the solution. Also, some guessed the solution for part (iii) but, of course, this did not do the full job.