

STEP II, 2018, Q3 EC

The first part of this question was well attempted in general, although some solutions required more care to be taken to check whether or not the extreme values are included within the range or not.

Many solutions to part (ii) did not generally include very clear explanations of the method and candidates often did not make it clear that they had demonstrated the result in both directions.

For the final part, candidates often did not find the “certain point” referred to in the question and instead tried to work with a general point (a, b) . Some candidates also attempted to calculate the integral directly rather than making use of the fact that the graph has rotational symmetry.



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