

STEP III, 2014 , Q3 EC

3. About half of the candidates attempted this, but it was the second least successfully attempted with a mean score just below a quarter marks. Most managed the first result, with those not doing so falling foul of various basic algebraic errors. The second result of part (i) was often answered with no justification. The second part was poorly done with a variety of approaches attempted such as obtaining a distance function, and then using completing the square or differentiation, or investigating the intersections of the circle and parabola. Few considered the geometry of the parabola and its normal which would have yielded the results fairly simply.



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