

STEP II, 2012, Q6 EC

Q6 This was the second least popular of the pure maths questions, partly (it seems) because many candidates did not know what was meant by the term *cyclic quadrilateral*. The other immediate hurdle was that candidates needed to know that “*opposite angles of a cyclic quad. are supplementary*”. We know this because of the large number of “attempts” that got no further than an initial diagram and a bit of working. Thus, the question was even less popular than the raw figures show. In reality, the question involved little more than some GCSE-level trigonometry, the *difference of two squares factorisation* and the result $\sin^2 + \cos^2 = 1$. Those who overcame the initial hurdles scored highly.



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