



STEP II, 2012, Q7 EC

Q7 This question was the least popular of the pure maths questions by a considerable margin, and attempts at it were usually fairly poor. In fact, very few candidates got beyond the opening (given) result. The barrier to further progress was almost invariably the failure to realise that all points on a circle centre O and radius 1 have position vectors that satisfy $\mathbf{x} \cdot \mathbf{x} = 1$.



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