

STEP II, 2016, Q11 EC

Although not a popular question, this was one of the better-answered questions in terms of the average number of marks achieved per candidate. Many candidates who attempted this question were able to gain many of the marks for part (i), often by substituting $\tan \theta$ for $\frac{b}{a}$ into the simultaneous equations and then eliminating t . Some candidates, however, lost some marks for assuming that $a = \cos \theta$ and $b = \sin \theta$. Part (ii) was well answered by many candidates, but very few solutions successfully explained the link between the two parts of the question.



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