

STEP III, 2014 , Q5 EC

5. This was a moderately popular question attempted by half the candidates, with some success, scoring a little below half marks. There were some basic problems exposed in this question such as the differences between a vector and its length, the negative of a vector and the vector, and the meaning of 'if and only if' resulting in things being shown in one direction only throughout the question. Part (i) was generally well done, but in part (ii), it was commonly forgotten that there were two conditions for XYZT to be a square. Approaches using real and imaginary parts (breaking into components) were not very successful.



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