

STEP III, 2012 Q2 EC

2. Three quarters of the candidates attempted this question, making it the second most popular, and one of the two most successful. Generally, part (i) was successfully attempted, though at times marks were dropped through insufficient explanation and quite a few struggled to deal with the “remainder term”. Some candidates expanding the brackets worked with the second and third, the fourth brackets etc., only including the first bracket last. About half the candidates considered the product of all of the denominators in part (ii) and replicated the method for the first part, whilst others used the results from part (i), replacing x by x^3 and employing the factorisations of sums and differences of cubes. Full marks were not uncommon on this question, nor were half marks.



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