

STEP III, 2010 Q3 EC

3. Just over half the candidates attempted this question with most scores being quarter, half or three quarters in equal shares. Most candidates understood the idea of the question, the definition of a primitive root, and many wrote the roots of unity in (modulus) -argument form or exponential form. Failure to present a logical argument in parts (ii) and (iv) was a common problem and $C_6(x)$ tripped up quite a few.



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