



STEP III, 2011 Q10 EC

10. Just under a quarter of candidates offered something on this, with relatively little success and less than 20 candidates earning good marks. As with question 9, it tended to be a case of “all or nothing”. Of the good solutions, half based their working on the motion of and relative to the centre of mass of the system, and the other half on setting up simultaneous differential equations for the displacements of the particles. Of the poor attempts, most usually drew some kind of diagram, but then didn’t use it to identify a sensible coordinate system, or positive direction, and there were common confusions over displacements x and extensions x . Energy approaches usually got nowhere.



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