



STEP III, 2012 Q11 EC

11. This was slightly less popular than question 10, and slightly less success was achieved. Most candidates correctly evaluated the kinetic and potential energies of the particle, and the kinetic energy of the rope. However they had more difficulty finding the potential energy of the rope, and put themselves at an unnecessary disadvantage by not explaining their logic. There were different ways of splitting up the rope, which one they used they frequently failed to make clear, and likewise those calculating potential energy relative to a reference point failed to make the choice of that point clear. The second part of the question was done very well using the result given for the first part. The last part was fairly easy, but quite a few candidates did not justify the logic fully.



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