A 2 kg mass is pushed up against a spring of constant 400 N/m, compressing it 0.22 m. The block is released, slides across a frictionless floor, then up a frictionless slope  $(37^{\circ})$  and eventually stops (for a moment).

- a) What is the speed of the block after it disconnects from the spring but before it encounters the incline?
- b) What is the maximum distance up the incline the mass reaches?