2 Fig. 2.1 shows an object at rest at the top of a straight slope which makes a fixed angle with the horizontal at a distance *h* above the ground.

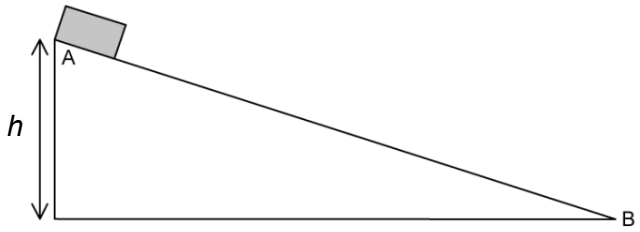

Fig. 2.1

The object is released and slides down the slope from A to B with negligible friction. Assume that the potential energy is zero at B.

(a) Sketch a graph in Fig 2.2 below, showing:
The variation of potential energy along the slope. Label this as P.
The variation of kinetic energy of the object along the slope. Label this as K. [2]

Fig. 2.2

(b) Sketch another graph in Fig 2.2, showing the variation of kinetic energy along the slope when there is a constant frictional force between the object and the surface. Label this F. Explain your graph. [3]

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