

- 4 (a) Explain what is meant by the concept of work.

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[2]

- (b) Using your answer to (a), derive an expression for the increase in gravitational potential energy  $\Delta E_p$  when an object of mass  $m$  is raised vertically through a distance  $\Delta h$  near the Earth's surface.

The acceleration of free fall near the Earth's surface is  $g$ .

[2]