

- 3 (a)** Show that the pressure  $P$  due to a liquid of density  $\rho$  is proportional to the depth  $h$  below the surface of the liquid.

[4]

- (b)** The pressure of the air at the top of a mountain is less than that at the foot of the mountain. Explain why the difference in air pressure is not proportional to the difference in height as suggested by the relationship in **(a)**.

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.....[2]