

- 1 (a) Define *density*.

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..... [1]

- (b) Explain how the difference in the densities of solids, liquids and gases may be related to the spacing of their molecules.

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..... [2]

- (c) A paving slab has a mass of 68 kg and dimensions 50 mm × 600 mm × 900 mm.

- (i) Calculate the density, in kg m^{-3} , of the material from which the paving slab is made.

density = kg m^{-3} [2]

- (ii) Calculate the maximum pressure a slab could exert on the ground when resting on one of its surfaces.

pressure = Pa [3]