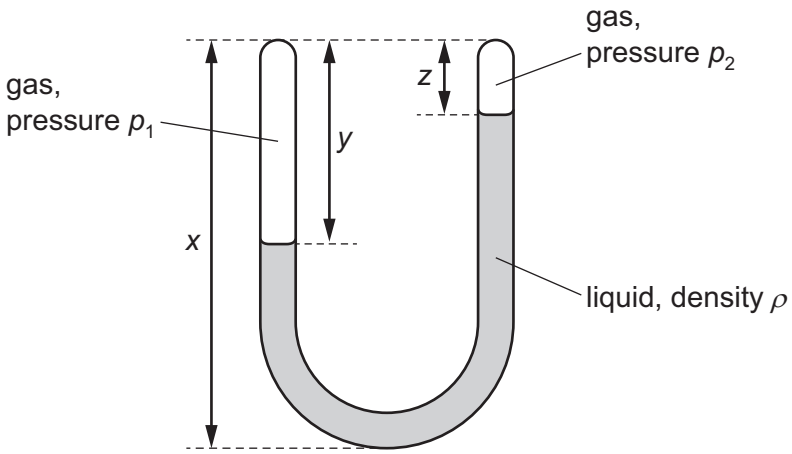
14 A granite rock at the surface of the Earth has density ρ. The rock is transported to the surface of another planet.

The acceleration of free fall on the surface of the other planet is twice that on the surface of the Earth.

What is the density of the rock on the other planet?

A 0.5ρ **B** ρ **C** 2ρ **D** 4ρ

15 A closed U-shaped tube contains a stationary liquid of density ρ. One side of the tube contains a gas at pressure p_1 and the other side contains a gas at pressure p_2, as shown.



The acceleration of free fall is g.

Which equation is correct?

A $p_1 = \rho g y$

B $p_2 = \rho g(x - z)$

C $p_1 - p_2 = \rho g(y - z)$

D $p_1 + p_2 = \rho g x$

16 Which product of two quantities is equal to power?

A force × distance

B force × velocity

C work done × time

D work done × velocity