18 The formula for hydrostatic pressure is $p = \rho gh$.

Which equation, or principle of physics, is used in the derivation of this formula?

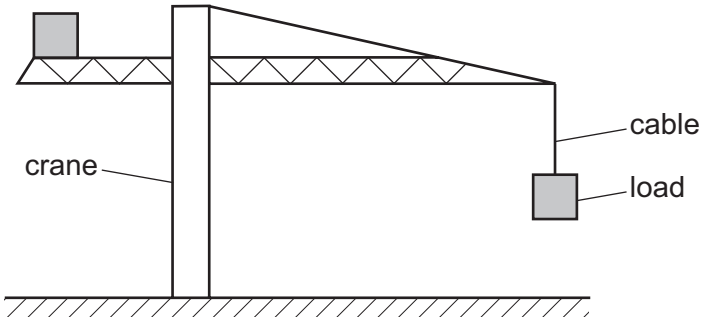
A density = $\frac{\text{mass}}{\text{volume}}$

B potential energy = mgh

C atmospheric pressure decreases with height

D density increases with depth

19 The diagram shows a large crane on a construction site lifting a cube-shaped load.



A model is made of the crane, its load and the cable supporting the load.

The material used for each part of the model is the same as that in the full-size crane, cable and load. The model is one tenth full-size in all linear dimensions.

What is the ratio $\frac{\text{extension of the cable on the full-size crane}}{\text{extension of the cable on the model crane}}$?

A 10^0 **B** 10^1 **C** 10^2 **D** 10^3

Space for working