**15** For a change in depth $\Delta h$ in a liquid of density $\rho$, the change in pressure $\Delta p$ is given by $\Delta p = \Delta h \rho g$ where $g$ is the acceleration of free fall.

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

**A** atmospheric pressure decreases with height

**B** change in gravitational potential energy = mass $\times$ $g\Delta h$

**C** $\rho = \dfrac{\text{mass}}{\text{volume}}$

**D** the density of a fluid increases with depth