

**20** A child drinks a liquid of density  $\rho$  through a vertical straw.

Atmospheric pressure is  $p_0$  and the child is capable of lowering the pressure at the top of the straw by 10%. The acceleration of free fall is  $g$ .

What is the maximum length of straw that would enable the child to drink the liquid?

**A**  $\frac{p_0}{10\rho g}$

**B**  $\frac{9p_0}{10\rho g}$

**C**  $\frac{p_0}{\rho g}$

**D**  $\frac{10p_0}{\rho g}$

**21** What is the ultimate tensile stress of a material?