

**13** At sea level, atmospheric pressure is 100 kPa and the density of air is  $1.3 \text{ kg m}^{-3}$ .

Assume that the density of air decreases linearly with height above sea level.

What is an estimate of the total height of the atmosphere based on this information?

**A** 7.8 km

**B** 16 km

**C** 77 km

**D** 150 km