12 The density of an ideal gas is 1.2 kg m^{-3} at a pressure of 1.0×10^5 Pa.

What is the root-mean-square (r.m.s.) speed of the molecules of the gas?

A 350 m s^{-1} **B** 500 m s^{-1} **C** 3700 m s^{-1} **D** 2.50×10^5 m s^{-1}