18 The density of argon gas at a pressure of 1.00×10^5 Pa and a temperature of 300 K is 1.60 kg m^{-3}. Assuming that it behaves as an ideal gas, what is the root-mean-square speed of argon atoms at this temperature?

A 216 m s^{-1} **B** 250 m s^{-1} **C** 306 m s^{-1} **D** 433 m s^{-1}