11 A container filled with an ideal gas is at a temperature of 80 °C. The root-mean-square (r.m.s.) speed of the gas molecules is 350 m s^{-1}.

The temperature of the gas is increased to 160 °C.

What is now the r.m.s. speed of the gas molecules?

A   390 m s^{-1} B   430 m s^{-1} C   490 m s^{-1} D   700 m s^{-1}