11 Two vessels Y and Z are of the same volume.

Vessel Y contains 8 moles of hydrogen gas molecules of molar mass 2 g mol^{-1} while vessel Z contains 8 moles of oxygen gas molecules of molar mass 32 g mol^{-1}.

The gas pressure is the same in both vessels.

What is the ratio of the root-mean-square speed of the gas molecules in vessel Y to that in vessel Z?

A 256 **B** 16 **C** 4 **D** 1

12 Which statement about internal energy is correct?