

- 12** A fixed mass of an ideal gas is at a pressure of $1.0 \times 10^5 \text{ Pa}$. It has a temperature of 300 K and a volume of 0.010 m^3 .

What is the total kinetic energy of the gas molecules after the volume is changed to 0.0050 m^3 at constant temperature?

- A** 500 J **B** 1000 J **C** 1500 J **D** 2000 J

- 13** An iron pellet, of mass m and specific heat capacity c , hits a steel plate at speed v . During the