

- 12** In a mixture of 2 monatomic gases X and Y, the molecules of Y have twice the mass of those of X. The mixture is in thermal equilibrium and the molecules of Y have a mean translational kinetic energy of  $6.0 \times 10^{-21}$  J.

What is the mean translational kinetic energy of the molecules of X?

- A**  $3.0 \times 10^{-21}$  J      **B**  $4.2 \times 10^{-21}$  J      **C**  $6.0 \times 10^{-21}$  J      **D**  $8.5 \times 10^{-21}$  J