

- 14** An ideal gas has thermodynamic temperature T , and its molecules has root-mean-square speed c_{rms} . If the gas is heated to temperature $2T$, what is the new root-mean-square speed of the molecules?

A $\sqrt{2}c_{rms}$

B $2c_{rms}$

C $2\sqrt{2}c_{rms}$

D $4c_{rms}$