

**13** The density of helium at 150 kPa is  $0.178 \text{ kg m}^{-3}$ . What is the root-mean-square speed of its particles?

**A**  $130 \text{ m s}^{-1}$

**B**  $232 \text{ m s}^{-1}$

**C**  $1300 \text{ m s}^{-1}$

**D**  $1600 \text{ m s}^{-1}$

**14** An ideal gas goes through the thermodynamic cycle EECHE as shown.