

**18** In deriving the equation  $p = \frac{1}{3} \rho \langle c^2 \rangle$  using the kinetic theory of gases, which of the following is **not** a valid assumption?

- A** The volume of the molecules is negligible compared with the volume of the gas.
- B** The duration of a collision is negligible compared with the time between collisions.
- C** The molecules experience negligible change of momentum on collision with the walls of the container.
- D** Collisions with the walls of the container and with other molecules cause no change in the average kinetic energy of the molecules.