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In deriving the equation $p = \frac{1}{3} \rho \langle c^2 \rangle$ in the simple kinetic theory of gases, where p is pressure, ρ is the density of the gas and $\langle c^2 \rangle$ is the mean square speed of the gas particles, which of the following is not taken as a valid assumption?

- A** The molecules are in continuous random motion.
- B** Attractive forces between the molecules are negligible.
- C** The average kinetic energy of a molecule is directly proportional to the temperature of the gas.
- D** Collisions with the walls of the container and with other molecules cause no change in the average kinetic energy of the molecules.