12 An ideal gas is contained in a cylinder with a movable piston. At pressure p, volume V and temperature T, it has N_v molecules per unit volume. If the pressure of the gas is changed to $0.50p$, and the temperature to $2.0T$, the number of molecules per unit volume becomes

A 0.25 N_v **B** 0.50 N_v **C** 1.0 N_v **D** 4.0 N_v