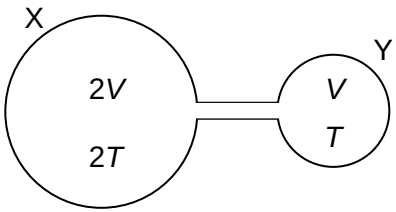
12 An ideal gas is contained in two spherical containers X and Y of volume $2V$ and V respectively, connected by a hollow tube of negligible volume. The containers X and Y are maintained at temperatures $2T$ and T respectively. The setup is shown in the diagram below.



What is the ratio $\frac{\text{number of moles of gas in container X}}{\text{number of moles of gas in container Y}}$?

A 0.25 **B** 1 **C** 2 **D** 4