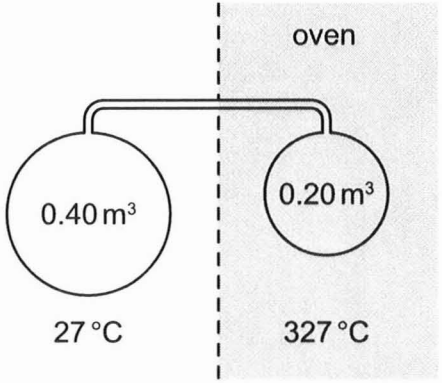
19 Two glass bulbs of constant volume $0.40\,m^3$ and $0.20\,m^3$ are connected by a fine tube of negligible volume. This sealed system contains a mass of ideal gas at atmospheric pressure $1.00 \times 10^5\,Pa$ at a temperature of 27 °C. The smaller bulb is then placed in an oven and heated to 327 °C.



What is the new pressure in the system?

A $1.20 \times 10^5\,Pa$

B $1.33 \times 10^5\,Pa$

C $1.44 \times 10^5\,Pa$

D $1.50 \times 10^5\,Pa$