13 One mole of an ideal gas at atmospheric pressure 1.0×10^5 Pa and temperature 300 K occupies a volume of 0.050 m³. The pressure and temperature of the gas are raised to 5.0×10^5 Pa and 900 K.

What is the volume that the gas occupies?

A 0.030 m³

B 0.15 m³

C 0.45 m³

D 2.3 m³