

- 2 (a) State what is meant by the *Avogadro constant* N_A .

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.....

[2]

- (b) A balloon is filled with helium gas at a pressure of 1.1×10^5 Pa and a temperature of 25 °C.

The balloon has a volume of 6.5×10^4 cm³.
Helium may be assumed to be an ideal gas.

Determine the number of gas atoms in the balloon.

number = [4]