

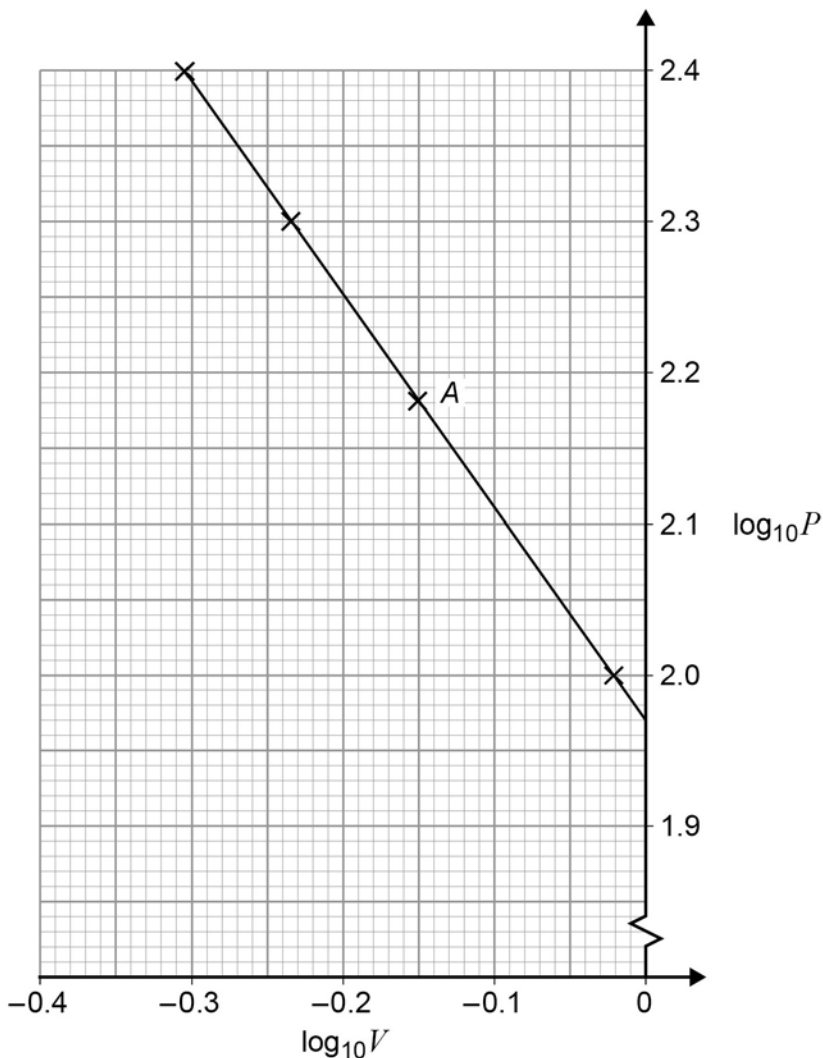
8 Maxine measures the pressure, P kilopascals, and the volume, V litres, in a fixed quantity of gas.

Maxine believes that the pressure and volume are connected by the equation

$$P = cV^d$$

where c and d are constants.

Using four experimental results, Maxine plots $\log_{10}P$ against $\log_{10}V$, as shown in the graph below.



8 (a) Find the value of P and the value of V for the data point labelled A on the graph. [2 marks]

8 (b) Calculate the value of each of the constants c and d . [4 marks]

8 (c) Estimate the pressure of the gas when the volume is 2 litres. [2 marks]