• The data given in the table below were obtained for the reaction between nitric oxide and chlorine at 1400 K.

Marks 4

$$2NO(g) \,+\, Cl_2(g) \,\rightarrow\, 2NOCl(g)$$

Experiment number	$\begin{array}{c} \text{INITIAL } [\text{Cl}_2] \\ (\text{mol}^{-1} \text{ L}^{-1}) \end{array}$	INITIAL [NO] (mol ⁻¹ L ⁻¹)	INITIAL REACTION RATE (mol ⁻¹ L ⁻¹ s ⁻¹)
1	0.10	0.10	0.18
2	0.20	0.10	0.36
3	0.10	0.20	0.72

Deduce the rate law for this reaction and calculate the value of the rate constant.

RATE LAW	RATE CONSTANT
Answer:	Answer: