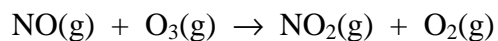


**Marks**  
**3**

- Nitric oxide reacts with ozone according to the following equation.



The following rate data were collected at a specified temperature.

Trial	Initial[NO] (M)	Initial [O <sub>3</sub> ] (M)	Initial rate of reaction (M s <sup>-1</sup> )
1	$2.1 \times 10^{-6}$	$2.1 \times 10^{-6}$	$1.6 \times 10^{-5}$
2	$6.3 \times 10^{-6}$	$2.1 \times 10^{-6}$	$4.8 \times 10^{-5}$
3	$6.3 \times 10^{-6}$	$4.2 \times 10^{-6}$	$9.6 \times 10^{-5}$

What is the experimental rate law for the reaction?

What is the value of the rate constant of this reaction?

Answer: