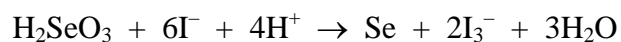


**Marks**  
**6**

- The following reaction is run from 4 different starting positions.



Experiment Number	Initial $[\text{H}_2\text{SeO}_3]$ (mol L <sup>-1</sup> )	Initial $[\text{I}^-]$ (mol L <sup>-1</sup> )	Initial $[\text{H}^+]$ (mol L <sup>-1</sup> )	Initial rate of increase of $[\text{I}_3^-]$ (mol L <sup>-1</sup> s <sup>-1</sup> )
1	0.100	0.100	0.100	1.000
2	0.100	0.075	0.100	0.422
3	0.075	0.100	0.100	0.750
4	0.100	0.075	0.075	0.237

Determine the rate law for the reaction.

Rate law:

Calculate the value of the rate constant.

Answer: