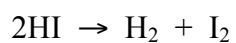


Marks
4

- At a certain temperature the following data were collected for the decomposition of HI.



Experiment	Initial [HI] (mol L ⁻¹)	Initial rate of reaction (mol L ⁻¹ s ⁻¹)
1	1.0×10^{-2}	4.0×10^{-6}
2	2.0×10^{-2}	1.6×10^{-5}
3	3.0×10^{-2}	3.6×10^{-5}

Determine the rate law for the reaction.

What is the value of the rate constant for the decomposition of HI?

Answer: