

Marks
4

- Consider the results of the following set of experiments studying the rate of the chemical reaction: $2A + B \rightarrow 3C + D$

Experiment #	initial [A] / M	initial [B] / M	Rate / M hr ⁻¹
1	0.240	0.120	2.00
2	0.120	0.120	0.500
3	0.240	0.060	1.00

Write the rate law expression.

Rate =

Calculate the rate constant, k , with units.

$k =$

What is the rate of the reaction when [A] is 0.0140 M and [B] is 1.35 M?

Rate =