Homework sheet

Name Class Date

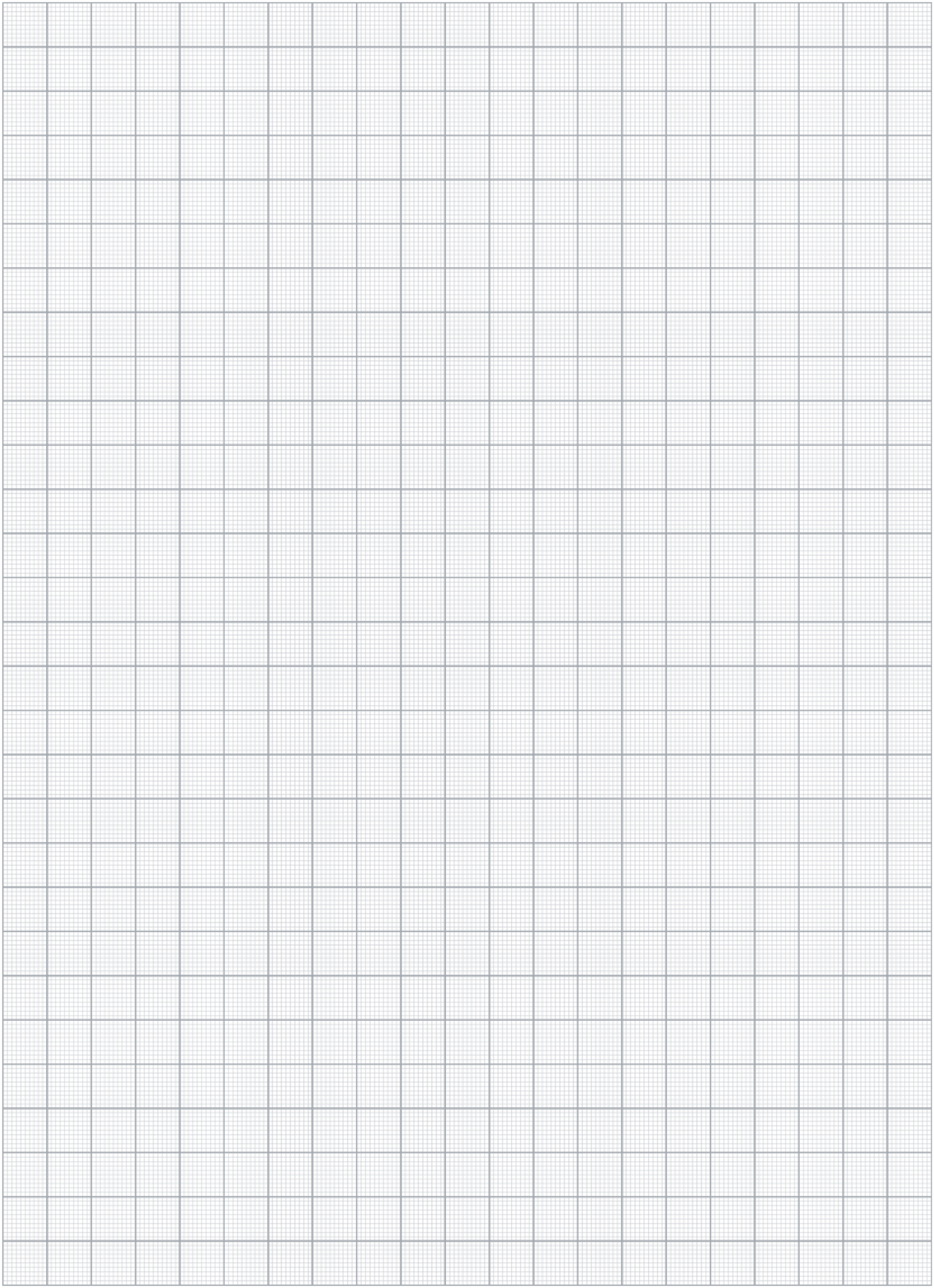
**Answer ALL questions. Write your answers in the spaces provided.**

**1** Use the results table to determine the initial rate of reaction, the rate of reaction at 1100 seconds and the rate of reaction at 2250 seconds.

You will need to submit your work on graph paper.

[14 marks]

|  |  |
| --- | --- |
| Time (s) | Concentration of reactant, X (mol/dm3) |
| 0 | 2.25 |
| 200 | 1.90 |
| 400 | 1.65 |
| 600 | 1.40 |
| 800 | 1.20 |
| 1100 | 0.95 |
| 1400 | 0.75 |
| 1700 | 0.55 |
| 2000 | 0.4 |
| 2300 | 0.35 |
| 2600 | 0.25 |
| 3000 | 0.20 |



**2** Explain the term ‘collision theory’ and how it is used when explaining rates of reaction. Use the following key words/terms and ensure that the meaning of each term is clear.

**activation energy  
orientation**

**successful collision  
rate**

**frequency**

Include diagrams to support your explanation.

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[6 marks]

[Total for Homework = 20 marks]