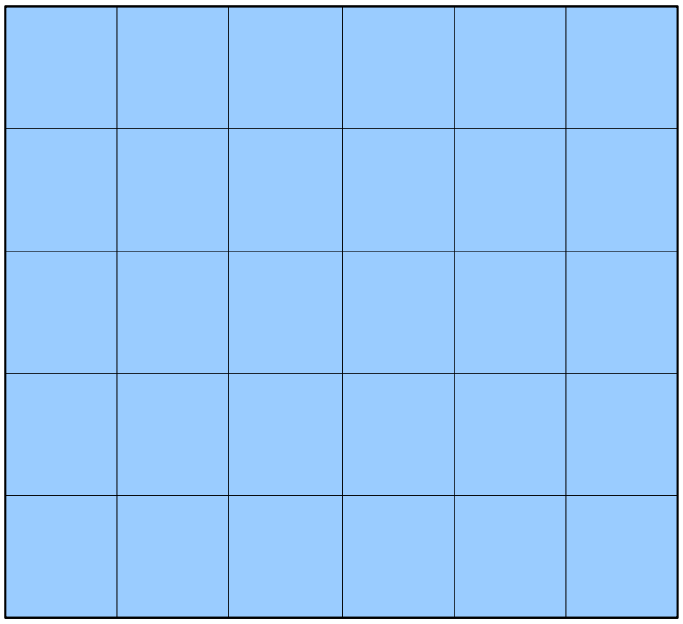
Example of a Simple Reaction and Its Proposed Mechanism

$H_2(g) + Cl_2(g) \rightarrow 2HCl(g)$

Defining *Rate*

Rate for a chemical reaction can be defined in terms of the change in concentration (or amount) of reactants or products with time.

Ideally, for any point in the course of the reaction, *Rate*



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Rate

Initial *Rate*

Because rate changes over time, comparisons between reaction rates need to be made at the same elapsed time.

For convenience, comparisons are often made between *initial rates*, taken at the very beginning of the reaction ($t = 0$).

Differential Rate Law