Chem 1312 SI 2/6

Mechanism	Elementary Reactions	Rate-Determining Step
Collision Model	Molecularity	True

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

1. Tells us how many molecules are involved in that step of the mechanism
2. Molecules often collide without forming products
3. A series of stepwise reactions that show how reactants become products
4. The _____ is based on the kinetic molecular theory
5. The different steps of a reaction are known as
6. The overall reaction cannot occur faster than the slowest reaction in the mechanism which is the _____

For the elementary reaction, determine the molecularity and the rate law:

$$Na + Cl_2 \rightarrow 2NaCl$$

Molecularity:

Rate Law:

Fill in the blanks:

1. Catalysts _____ (increase/decrease) the rate of reaction by _____ (increasing/decreasing) the activation energy required.
2. If the first step of a reaction is the rate determining step, the coefficients on the reactants side are _____ (the same/ different) as the order in the rate law.
3. The more collisions the _____ (more likely/less likely) a reaction will occur.