Rate Law

Rate Law	1st Order	Rate Constant
Instantaneous Rate	Slow Reaction	Initial Rate
Fast Reaction	2nd Order	Reaction Rate

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

1. A reaction which is linearly dependent on the concentration of a single reactant
2. A reaction with two reactants each in the first order
3. A coefficient that relates the rate of a chemical reaction to the concentration of the reactant at a given temperature (represented by "k")
4. The change in concentration over a time period
5. The rate at time 0
6. The rate at a specific time period
7. A reaction where $k \sim 10^9$ or higher is considered to be a…
8. A reaction where $k<10$ or lower is considered to be a…
9. Represented by rate=k[A][B]

1. Consider the data provided for the hydrogen concentration [H_2], the chlorine concentration [Cl_2], and the reaction rates (given in mol per liter per second)

Experiment	Initial [H_2]	Initial [Cl_2]	Rate
1	0.01	0.05	0.04
2	0.02	0.05	0.08
3	0.05	0.01	0.02
4	0.05	0.03	0.54

What is the overall reaction order?

Find the value of k:

Write the rate law: