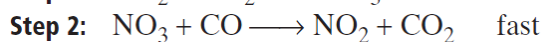


AP Chemistry - Kinetics Problems Part 3

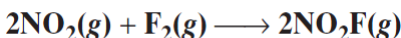
1) Consider the reaction of nitrogen dioxide with carbon monoxide:



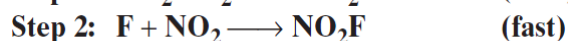
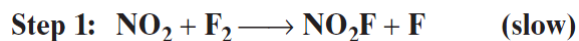
The proposed mechanism for the reaction is two steps. Determine the rate expression for the reaction and identify any catalysts and/or intermediates involved in the reaction.



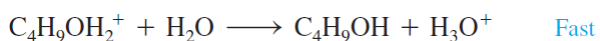
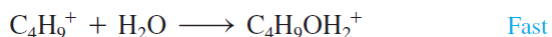
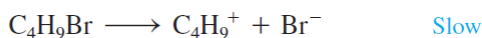
2) Consider the reaction of nitrogen dioxide with fluorine gas:



The proposed mechanism for the reaction is two steps. Determine the rate expression for the reaction and identify any catalysts and/or intermediates involved in the reaction.

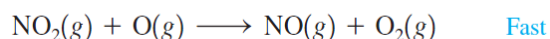
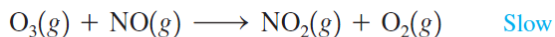


3) Consider the proposed mechanism for a given reaction.



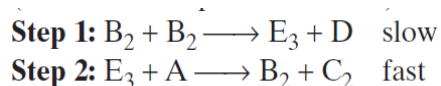
- What would be the overall reaction?
- Which species is a catalyst in the reaction?
- Which species is an intermediate in the reaction?
- What would be the rate equation?

4) One mechanism for the destruction of ozone in the upper atmosphere is:



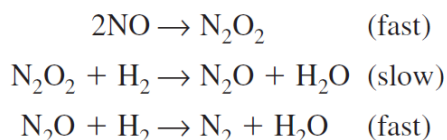
- What would be the overall reaction?
- Which species is a catalyst in the reaction?
- Which species is an intermediate in the reaction?
- What would be the rate equation?

5) Consider the proposed mechanism for a given reaction.



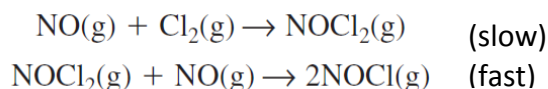
- What would be the overall reaction?
- Which species is a catalyst in the reaction?
- Which species is an intermediate in the reaction?
- What would be the rate equation?

6) Consider the proposed mechanism for a given reaction.



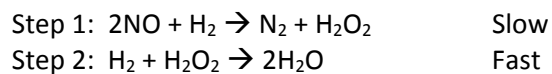
- What would be the overall reaction?
- Which species is a catalyst in the reaction?
- Which species is an intermediate in the reaction?
- What would be the rate equation?

7) It is believed that the following two elementary steps make up the mechanism for the reaction between nitrogen monoxide and chlorine:



- What would be the overall reaction?
- Which species is a catalyst in the reaction?
- Which species is an intermediate in the reaction?
- What would be the rate equation?

8) Consider the proposed mechanism for a given reaction.



- What would be the overall reaction?
- Which species is a catalyst in the reaction?
- Which species is an intermediate in the reaction?
- What would be the rate equation?