

Name _____

Period _____

**Honors Chemistry
Kinetics Practice Test**

Form P

Part I: General Terms: Define the following terms with the definition that a chemist would use.

Chemical Kinetics

Reaction Rate

Rate

Time

Mechanism

Rate Determining Step

Catalyst

Promoter

Inhibitor

Order of Reaction

Activated Complex

Transition State/Intermediate

Rate Constant

Activation Energy

Rate Law

Part II: Questions about Rates

1) Explain how a catalyst can lower the activation energy of a chemical reaction. Use a diagram and some big words to explain this effect.

2) What are the six factors that can affect reaction rate? How do they do it?

3) The concentration of a substance in a reaction changes from 8.0 M to 2.0 M in 20.0 seconds. Express the rate of this reaction in M/second.

4) Dinitrogen pentoxide decomposes into nitrogen dioxide and oxygen according to the following equation:



If the change in oxygen concentration was found to be 5.0 M/s, what is the reaction rate in terms of nitrogen dioxide?

Part III: Graphs

Draw a diagram of potential energy versus extent of reaction for an endothermic reaction and a second one for an exothermic reaction. Label ΔH , reactants, products, transition state, and activation energy.