Skill Practice 57

Intro to Reaction Rates

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hour: \_\_\_\_\_

1. Consider the following diagram of atoms:

Step 1 Step 2 Step 3

1. Does the above collision have enough energy for a reaction to form? Explain.
2. Circle the activated complex in the above diagram. Another name for activated complex is the

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. Which of the following could be the reaction? (There could be more than one.)

A) CO2 + Cl2 🡪 CO2Cl2 B) N2 + 3Ca 🡪 Ca3N2 C) 3 O2 + 4 Al 🡪 2 Al2O3

1. Redraw the above diagram (all three steps), but this time make it a collision that does NOT have enough energy to react:
2. Draw an energy diagram for an endothermic reaction. Clearly label the activation energy and the enthalpy change. Then explain how a catalyst would change the diagram you drew.
3. What is a catalyst?
4. Name three ways to speed up a reaction.