Reem and Reema

Assignment April 27, 2016

This is a 100-point classwork and homework assignment. You will complete these tasks during the next three periods. You may use the textbook and I will post some links.

**Chapter 6: Kinetics**

Tasks:

I. Reaction Mechanisms & Rate Graphs

1. Define and explain what a reaction mechanism is and provide a real world example.

2. Define “rate of reaction” using formulas. What does this tell you? What are the appropriate units for rates of reaction?

Examine the graph on page 199.

* How do you measure rate on a reaction graph that is curved?
* What does the shape of the curve represent? Explain.
* Why is it necessary to draw a tangent to the curve in a rate graph?

II. Collecting Empirical Data

Reactions are different. To determine rates, empirical data must be used. There are six basic methods to collect empirical rate data. Provide a brief (2-3 sentence) summary of each method and how rate is collected.

III. The Maxwell-Boltzmann Distribution Curve

1. Explain the curve. What does it represent (examine the axes)? How do you read it? What does the area under the curve represent (in your own words; relate it to a simple reaction).
2. Relate the rate of a reaction to the Boltzmann curve. Where would activation energy fall?
3. Be able to explain the relationship between the Boltzmann curve and an energy curve.
4. Complete practice problems on page 204 # 2, 3, 4; 207, 5, 6, 7; and 211, # 8 – 11.
5. On page 208, compare and contrast the Boltzmann curves for temperature. What do you see? What conclusions can you draw about the relationship with temperature? Do the same for the Boltzmann curve on page 210.