Rate Laws

Pre-lesson assignment- textbook page 273-276 + 284-286

Define the following terms

- Rate Equation

Make notes on rate equations

Use the following questions as guidance

1. For a reaction A + B → C + D it is found that the reaction is second order with respect to A and is first order with respect to B.
    a. Show how a rate equation can be written for this reaction.
    b. Show how the overall order can be calculated.
    c. Show that the units of k are dm^6 mol^{-2} s^{-1}
    d. If the concentration of A is 1 mol dm^{-3} and the concentration of B is 0.5 mol dm^{-3}, the rate is measured as 1.2×10^{-4} mol dm^{-3} s^{-1}. Show that k = 2.4×10^{-4} dm^6 mol^{-2} s^{-1}
2. Describe how an initial rates experiment can be used to determine rate laws
    a. How is using the initial rate more accurate than using the whole reaction?
    b. How is an iodine clock reaction set up?