

INTRODUCTION TO KINETICS

NAME _____

SECTION _____

1. List four factors that affect the rate of a chemical reaction. For each, provide a brief statement describing how it affects the speed of a chemical reaction.

2. a. Define the term *reaction rate*.

b. For the following chemical reaction



write a rate expression in terms of

i. the change in concentration of N_2O_5 with time;

ii. the change in concentration of NO_2 with time;

iii. the change in concentration of O_2 with time;

- iv. write a statement that compares the rate of appearance of NO_2 to the rate of appearance of O_2 ;
 - v. write a mathematical equation that equates the rates of the reactants and products in the reaction to each other.
3. In the plot below, three lines, labeled A, B, and C are shown. Identify (use the letter) which line best represents the *average rate*, *instantaneous rate*, and *initial rate* for the chemical reaction.

