Date:

1. Write the **predicted rate laws** for each of the following reactions.

A)
$$NO_2 + O_3 \square NO_3 + O_2$$

B)
$$2 \text{ NO} + \text{O}_2 \square 2 \text{ NO}_2$$

C)
$$2 N_2 O_5 \square 4 NO_2 + O_2$$

D)
$$NO_2 + CO \square NO + CO_2$$

E)
$$2 \text{ ClO}_2 + 2 \text{ OH}^- \square \text{ ClO}_3^- + \text{ClO}_2^- + \text{H}_2\text{O}$$

- 2. Determine the **Overall ORDER** of each reaction.
 - A)
 - B)
 - C)
 - D)
 - E)
- 3. What has to be done to confirm or validate the rate laws you predicted? Why?