

# Preclass Assignment

## CHEM 1100-General Chemistry I

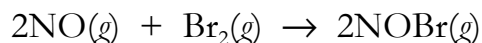
Name:

#8

Section: 31, MWF

Due Date: Monday 7/31/2017

The overall reaction between nitrogen monoxide and bromine may be written as follows:

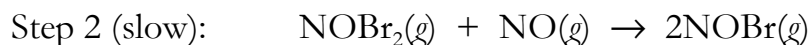
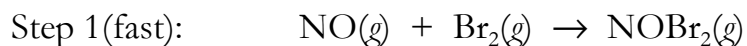


The observed rate law is:

$$\text{rate} = k[\text{NO}]^2[\text{Br}_2]$$

1. Is it likely that the given chemical equation is an elementary step? Why or why not?

The following is a proposed mechanism:



2. Add up the elementary steps above and show that they add up to the overall equation.

3. Write the rate law based on the slow step and then stop. There is a problem!