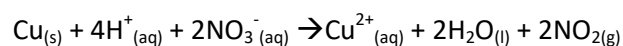


## Measuring Reaction Rates Homework – Student Edition

1. Define the following three terms...

- Independent variable
  
- Dependent variable
  
- Controlled variable

2. When copper metal reacts with concentrated nitric acid, brown nitrogen dioxide gas (NO<sub>2</sub>) forms:



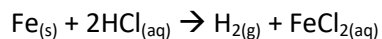
The rate of reaction is measured by observing how quickly the brown gas evolves.

- Identify the possible independent variables for this reaction which would change the rate of reaction
  
- Identify the dependent variable for this reaction
  
- List some aspects of the reaction which would need to be controlled.

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Due Date: \_\_\_\_\_

## Measuring Reaction Rates Homework – Student Edition

3. Iron was reacted with hydrochloric acid according to the following reaction:



a) Outline three methods that could be used to increase the rate of this reaction.

- Method 1

- Method 2

- Method 3

b) Identify the dependent variable

c) Describe how data for the dependent variable could be collected.