CEM-111 Pre-lab Assignment
Stoichiometry and Limiting Reactants

Name _____ Lab Day &Time _____

Before this laboratory, you should:

- Read the laboratory until you have a clear sense of what you will be doing.
- Note any points that need clarification.
- In your laboratory notebook update the table of contents, fill in the heading and write in the purpose of the laboratory session.
- Assess your preparation and understanding of today's work by answering the questions below.
- Your instructor will collect this at the beginning of the laboratory period.

Pre-lab Questions

Use the data below obtained when 5.00 g of zinc were reacted with various amounts of 2.0 M HCl and the graph to answer the questions that follow.

$$Zn\ (s)\ +\ 2\ HCl\ (aq)\ \rightarrow\ ZnCl_2\ (aq)\ +\ H_2\ (g)$$

Mass Zn (g)	Volume 2.0 M HCl (mL)	Mass H_2 formed (g)
5.00	0.0	0.000
5.00	20.0	0.040
5.00	40.0	0.081
5.00	60.0	0.121
5.00	80.0	0.154
5.00	100.0	0.154
5.00	120.0	0.154

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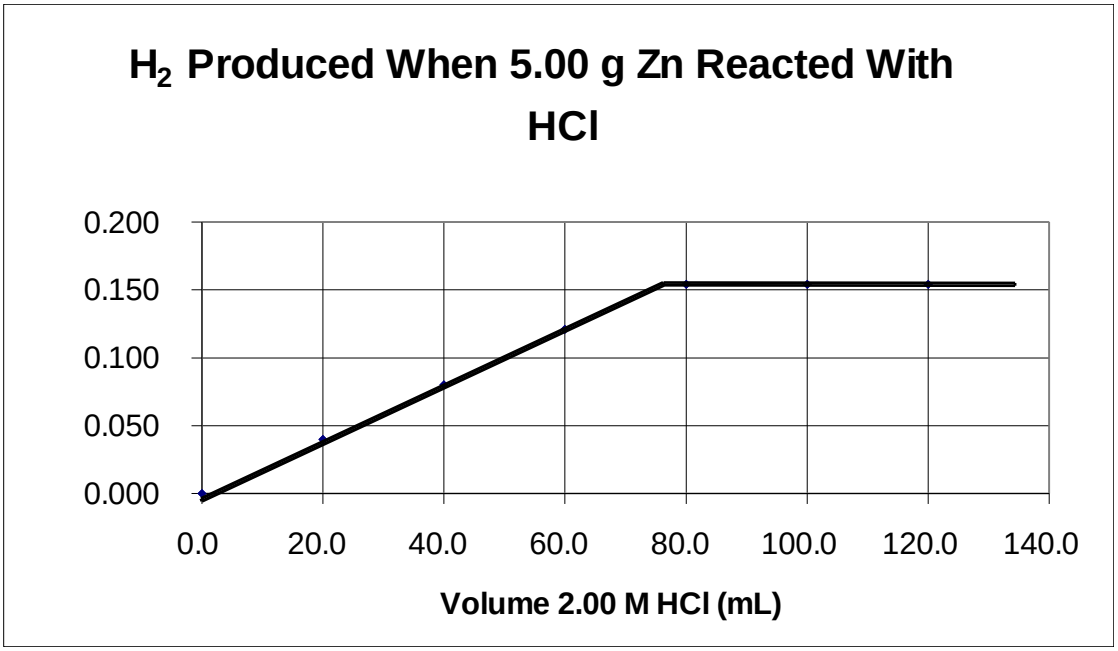

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Turn in this page only!

1. Which reactant is limiting the amount of H_2 produced in the region of the graph labeled A?

2. Which reactant is limiting the amount of H_2 produced in the region of the graph labeled B?

3. How many grams of hydrogen gas can be produced if 200.0 mL of 2.0 M HCl are reacted with 5.00 grams of zinc?

4. How many grams of Zn are required to completely react with 200.0 mL of 2.0 M HCl? How many grams of H_2 can be produced?