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Data for Experiment 5

Record your observations for each combination below. If a reaction occurs, write balanced MOLECULAR and NET-IONIC equations. If no reaction occurs, write NR. Make sure to include the physical states of all the products.

1. Cu(s) and AgNO₃(aq)

Observations:

Molecular:

Net-Ionic:

2. Pb(s) and Cu(NO₃)₂(aq)

Observations:

Molecular:

Net-Ionic:

3. Zn(s) and Pb(NO₃)₂(aq)

Observations:

Molecular:

Net-Ionic:

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4. Zn(s) and MgSO₄(aq)

Observations:

Molecular:

Net-Ionic:

5. Cu(s) and H₂SO₄(aq)

Observations:

Molecular:

Net-Ionic:

6. Zn(s) and H₂SO₄(aq)

Observations:

Molecular:

Net-Ionic:

Questions

1. Complete the following table by writing the symbols of the two elements whose reactivities are being compared in each test:

Well #	1	2	3	4	5	6
Greater Activity						
Lesser Activity						

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2. Based upon the comparisons in the table, draw further conclusions by:

A. arranging Pb, Mg, and Zn in order of decreasing activity (most active first).

_____ > _____ > _____

B. arranging Cu, Ag, and Zn in order of decreasing activity (most active first).

_____ > _____ > _____

C. arranging Mg, H, and Ag in order of decreasing activity (most active first).

_____ > _____ > _____

3. Now arrange the five metals from Question #2 above in order of decreasing activity. Explain why the position of hydrogen (H₂) cannot be exactly assigned.

_____ > _____ > _____ > _____ > _____

4. What additional test(s) would be required to determine the exact position of hydrogen in the activity series of elements in this study?

5. Would silver react with dilute hydrochloric acid? Briefly explain why or why not.

6. Would magnesium react with dilute sulfuric acid? Briefly explain why or why not.