

Name: _____ Date: _____

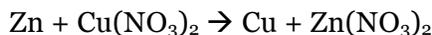
Chemistry ~ Ms. Hart **Class:** Anions or Cations



6.9 Activity Series

How do we apply the activity series to actual chemical reactions?

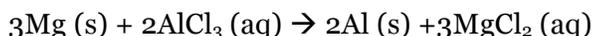
Example 1: Will this reaction take place?



In order to answer this question you must ask yourselves a couple of questions:

1. What are the two elements involved in the single replacement? _____
2. Which element is doing the replacing? _____
3. Which element is being replaced? _____
4. Is the element in #2 higher or lower than the element in #3? _____
5. Based on your answer in #4, will the reaction take place? _____

Example 2: Will this reaction take place?



1. What are the two elements involved in the single replacement? _____
2. Which element is doing the replacing? _____
3. Which element is being replaced? _____
4. Is the element in #2 higher or lower than the element in #3? _____
5. Based on your answer in #4, will the reaction take place? _____

Example 3: Will this reaction take place?

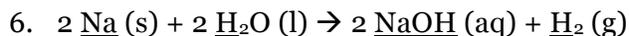


1. What are the two elements involved in the single replacement? _____
2. Which element is doing the replacing? _____
3. Which element is being replaced? _____
4. Is the element in #2 higher or lower than the element in #3? _____
5. Based on your answer in #4, will the reaction take place? _____

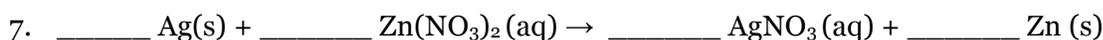
PRACTICE:

1. Which metal is more active than Ni and less active than Zn?
(1) Cu
(2) Cr
(3) Mg
(4) Pb
2. Which of the following would replace H₂ in a reaction?
(1) Cu
(2) Cl₂
(3) Ca
(4) F₂
3. All of the following are metals except:
(1) Ba
(2) Cl₂
(3) Ca
(4) Au

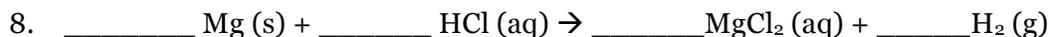
4. In which of the following pairs of metals is the more active metal listed first?
- (1) Iron/sodium
 - (2) Copper/tin
 - (3) Lithium/platinum
 - (4) Zinc/magnesium
5. Based on the activity series, which of the following reactions is likely to occur?
- (1) $2\text{Fe} + 6\text{HCl} \rightarrow 2\text{FeCl}_3 + 3\text{H}_2$
 - (2) $\text{MgSO}_4 + \text{Zn} \rightarrow \text{ZnSO}_4 + \text{Mg}$
 - (3) $3\text{BaCl}_2 + 2\text{Al} \rightarrow 2\text{AlCl}_3 + 3\text{Ba}$
 - (4) $\text{H}_2 + 2\text{LiOH} \rightarrow 2\text{Li} + 2\text{H}_2\text{O}$



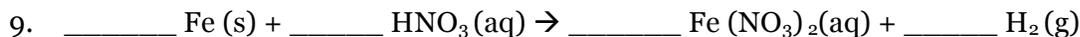
- (A) Is the following chemical reaction balanced? If not, balance it.
 (B) Will Na replace H in this reaction?



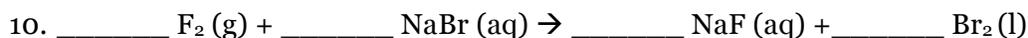
- (A) Is the reaction balanced? If not, balance it.
 (B) Will this reaction occur as written? Explain.



- (A) Is the chemical balanced? If not, balance it.
 (B) Identify the type of chemical reaction that occurs when magnesium reacts with hydrochloric acid (HCl). _____
 (C) Will Mg react with HCl to generate H_2 ? Why or why not?



- (A) What is the total number of oxygen atoms represented in the formula of the iron compound produced? _____
 (B) Will this reaction occur as written?



- (A) Is the following chemical reaction balanced? If not, balance it.
 (B) Will this reaction occur as written?