

## CONCEPT: ACID-BASE REACTIONS

- Common **Acid-Base Reactions** include reactions of \_\_\_\_\_ with:

**a** hydroxide ( $\text{OH}^-$ ) bases, **b** neutral *amines*, **c** metals and **d** metal oxides ( $\text{O}^{2-}$ ).

- **Amines:** compounds containing (N & H) or (C, N & H). - Neutral Amines are \_\_\_\_\_ bases.

### Acid-Base Reactions

#### **a** Acid Reacts with Hydroxide Base.

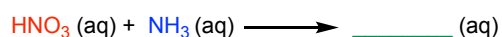
□ **Acid** and **Base** produce \_\_\_\_\_ and \_\_\_\_\_ as product.



#### **b** Acid Reacts with a Neutral Amine.

□ **Neutral Amine** = Weak Base □ Example:  $\text{NH}_3$  &  $\text{CH}_3\text{NH}_2$

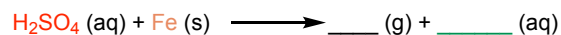
□ **Acid** and **Base** produce \_\_\_\_\_.



#### **c** Acid Reacts with Metal.

□ Common **metals** include: Na, K, Mg, Ca, Fe, Zn, Al, Sn

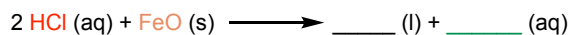
□ **Acid** and **metal** produce \_\_\_\_\_ and \_\_\_\_\_ as product.



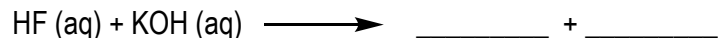
#### **d** Acid Reacts with Metal Oxides ( $\text{O}^{2-}$ ).

□ Example of **Metal Oxides**:  $\text{Li}_2\text{O}$ ,  $\text{Na}_2\text{O}$ ,  $\text{K}_2\text{O}$ ,  $\text{MgO}$ ,  $\text{CaO}$ ,  $\text{BaO}$ ,  $\text{FeO}$ .

□ **Acid** and **metal oxide** produce \_\_\_\_\_ and \_\_\_\_\_ as product.

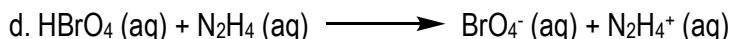
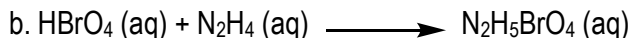
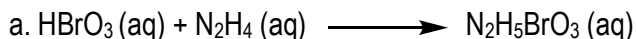


**EXAMPLE:** Complete the following reaction:



**PRACTICE:** Write a balanced chemical equation for the following acid-base reaction:

Bromic acid reacting with hydrazine ( $\text{N}_2\text{H}_4$ ).



**CONCEPT: ACID-BASE REACTIONS**

**PRACTICE:** Write a balanced chemical equation, include phases, for the following acid reaction:  $\text{HClO}_3$  reacting with Zn metal.

**PRACTICE:** Write a balanced chemical equation, include phases, for the following acid reaction:  $\text{HBr}$  reacting with  $\text{Li}_2\text{O}$ .