Neutralization Reactions

Remember double replacement reactions?
Predict the products of the reaction below.

$$HCl + NaOH \rightarrow ???$$

acid base

$$HCl + NaOH \rightarrow NaCl + HOH$$

H_2O

acid base salt water

ionic compound

Acid + Base --> Salt + water

Neutralization Reactions

$$HCl + NaOH \rightarrow NaCl + HOH$$

- *Acids and bases are opposite each other*
  - *acids donate H^+, bases accept H^+*
- *When they combine they NEUTRALIZE each other -- neither acidic nor basic anymore*

Neutralization Reactions

Practice #1

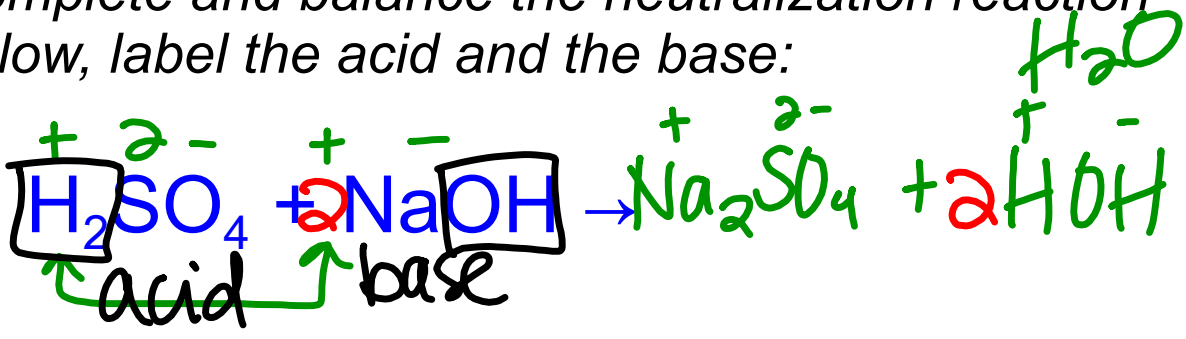
Complete and balance the neutralization reaction below, label the acid and the base:

$H_2SO_4 + NaOH \rightarrow$

Neutralization Reactions

Practice #1

Complete and balance the neutralization reaction below, label the acid and the base:



Neutralization Reactions

Practice #2

Complete and balance the neutralization reaction below, label the acid and the base:

$HCl + Ca(OH)_2 \rightarrow$

Neutralization Reactions

Practice #2

Complete and balance the neutralization reaction below, label the acid and the base:

$2HCl + Ca(OH)_2 \rightarrow CaCl_2 + 2HOH$

acid base

Neutralization Reactions

Practice #3

Complete and balance the neutralization reaction below, label the acid and the base:

$H_2SO_3 + NH_4OH \rightarrow$

Neutralization Reactions

Practice #3

Complete and balance the neutralization reaction below, label the acid and the base:

$$H_2SO_3 + 2NH_4OH \rightarrow 2H_2O + (NH_4)_2SO_3$$