

Acids and Bases

Content Objective:

I can understand acid-base (neutralization) reactions.

Criteria for Success:

I can define neutralization.

I can predict the products in a neutralization reaction.

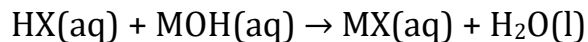
Notes

Neutralization

A. In aqueous solutions, _____ is the reaction of hydrogen ions, H^+ , and hydroxide ions, OH^- to form pH neutral water molecules.

1. A _____ is also produced. It is an ionic compound composed of a _____ from a base and an _____ from an acid.
2. Neutralization reactions are examples of _____ replacement reactions.

General Neutralization Reaction



Guided Practice

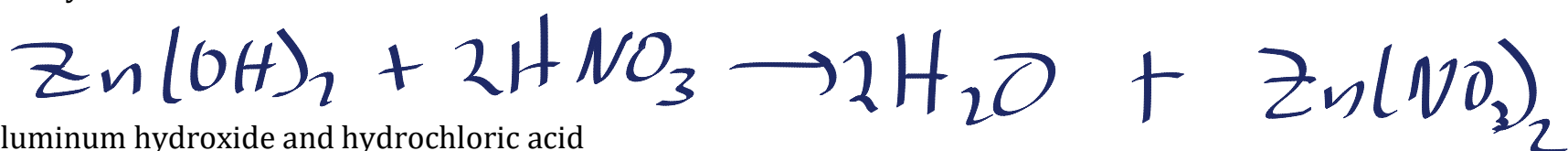
1-6. Write the balanced chemical equations for the neutralization reactions between:



4. hydrobromic acid and barium hydroxide



5. zinc hydroxide and nitric acid



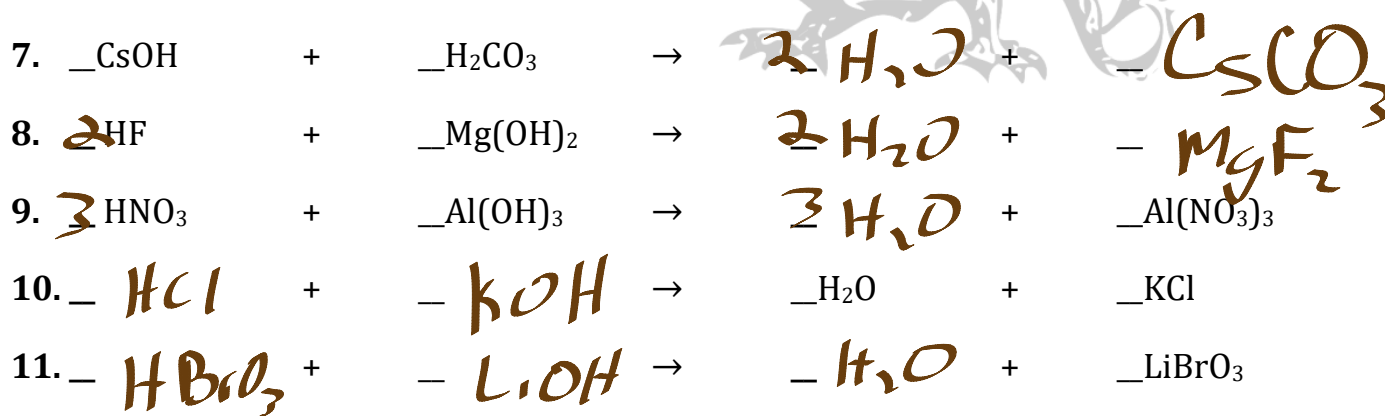
6. aluminum hydroxide and hydrochloric acid





Acids and Bases

7-11. Complete and balance the following equations representing neutralization reactions:



12-18. Give the name and the formula of the ionic compound produced by neutralization reactions between the following acids and bases:

Acid and Base reactants	Name of ionic compound	Formula
12. nitric acid and sodium hydroxide	Sodium Nitrate	NaNO_3
13. hydroiodic acid and calcium hydroxide	Calcium Iodide	CaI_2
14. magnesium hydroxide and hydrosulfuric acid	magnesium sulfide	MgS
15. ammonium hydroxide and hydrofluoric acid	ammonium fluoride	NH_4F
16. barium hydroxide and sulfuric acid	Barium sulfate	BaSO_4
17. chloric acid and rubidium hydroxide	rubidium chlorate	RbClO_3
18. calcium hydroxide and carbonic acid	calcium carbonate	CaCO_3

19-23. For each of the following ionic compounds, identify the acid and base that reacted to form them.

Salt	Acid	Base
19. NaCl	HCl	NaOH
20. $\text{Ca}_3(\text{PO}_4)_2$	H_3PO_4	$\text{Ca}(\text{OH})_2$
21. $\text{Zn}(\text{NO}_3)_2$	HNO_3	$\text{Zn}(\text{OH})_2$
22. $\text{Al}(\text{ClO}_3)_3$	HClO_3	$\text{Al}(\text{OH})_3$
23. NH_4I	HI	NH_4OH