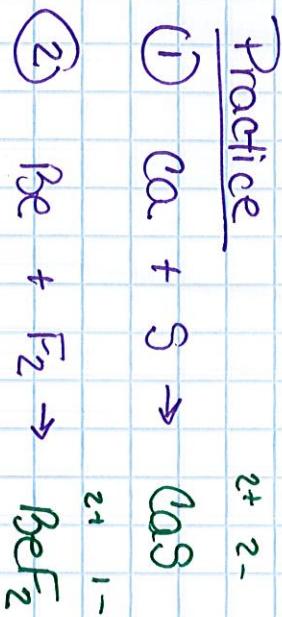
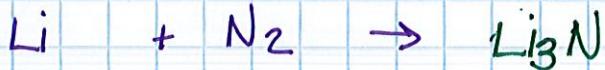
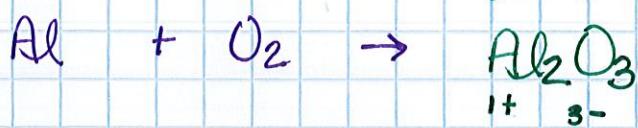
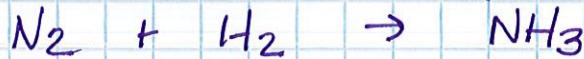
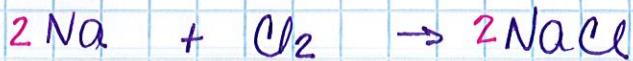


# 5 Types of Reactions & Predicting Products

## (1) Synthesis - "coming together"

general form: A + B → AB  
2 reactants form 1 product

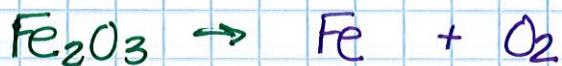
Ex)



## (2) Decomposition - "breaking apart"

general form: AB → A + B  
1 reactant forming 2 products

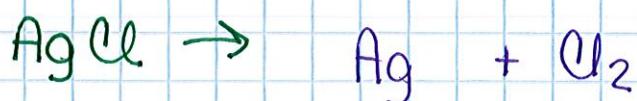
Ex)



~~Diatomeric Molecules~~

$\text{H}_2 \text{ O}_2 \text{ N}_2 \text{ F}_2$

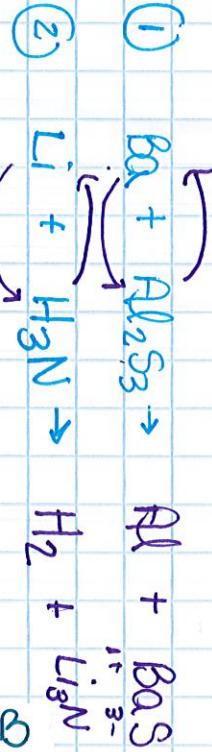
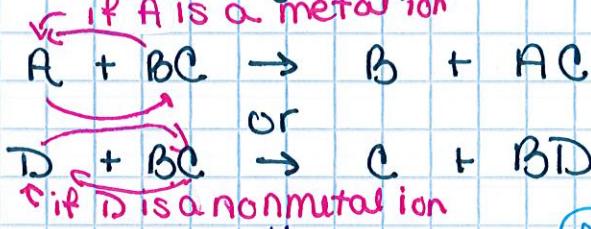
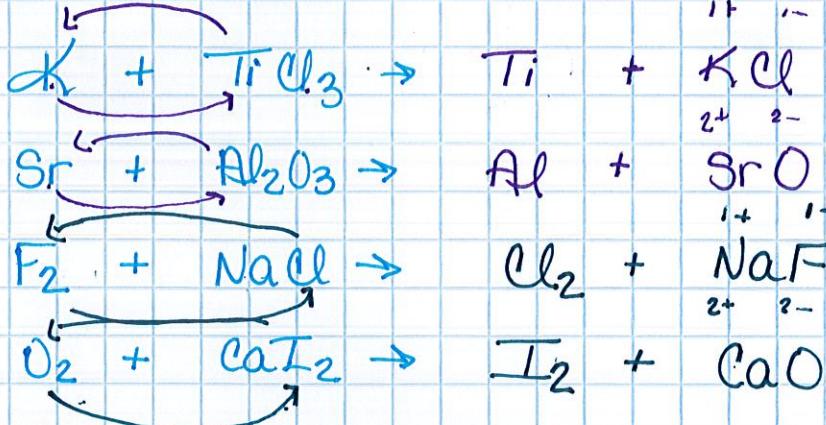
## Practice



### (3) Single-Replacement - replacing only 1 ion

general forms:  
metals replace metals  
nonmetals replace nonmetals

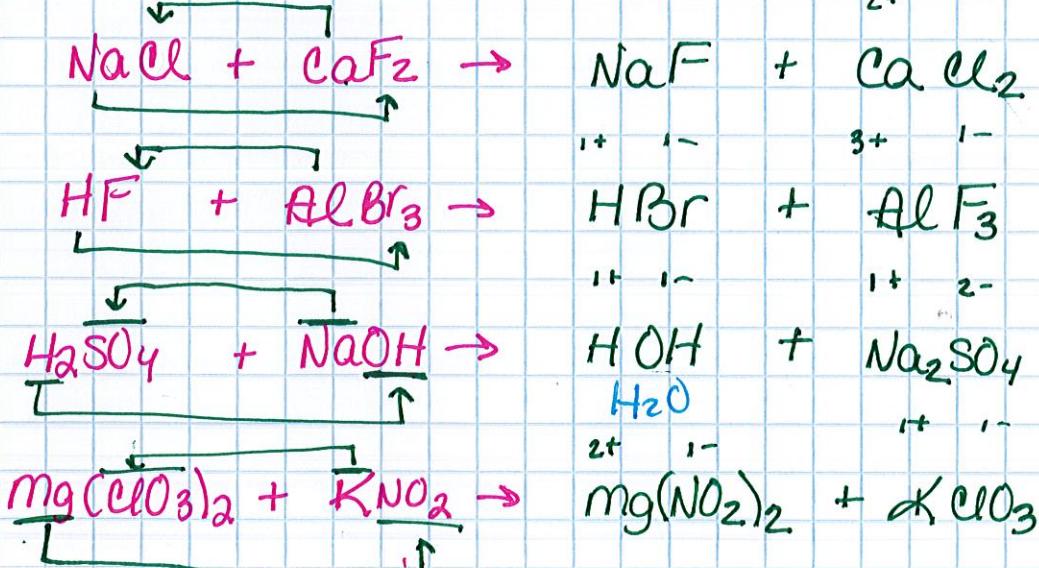
Ex)



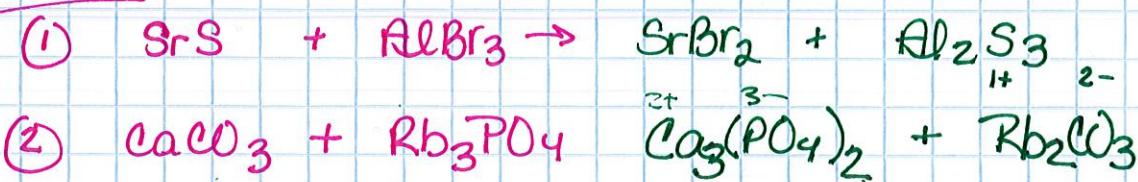
### (4) Double-Replacement - "do si do"

general form:  $\text{AB} + \text{CD} \rightarrow \text{AD} + \text{CB}$   
2 compounds trade ions

Ex)



Practice



(5) Combustion - hydrocarbon reacts w/ oxygen,  
always produces  $\text{CO}_2$  &  $\text{H}_2\text{O}$  gases

Ex)

