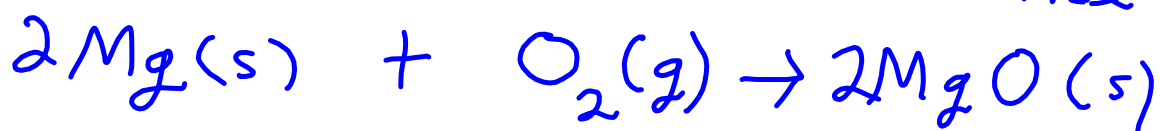


REACTION TYPES

1. Combination (synthesis)

Two or more substances form a single substance.

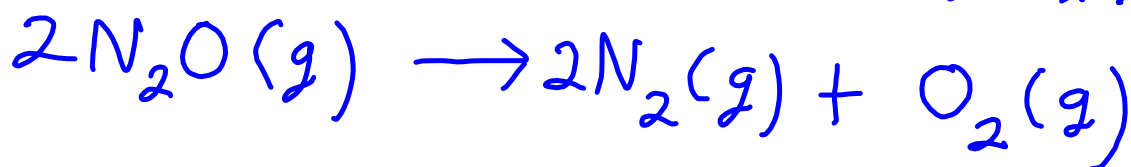
magnesium + oxygen \rightarrow magnesium
oxide



2. Decomposition

A single substance forms 2 or more substances.

dinitrogen monoxide \rightarrow nitrogen
+ oxygen

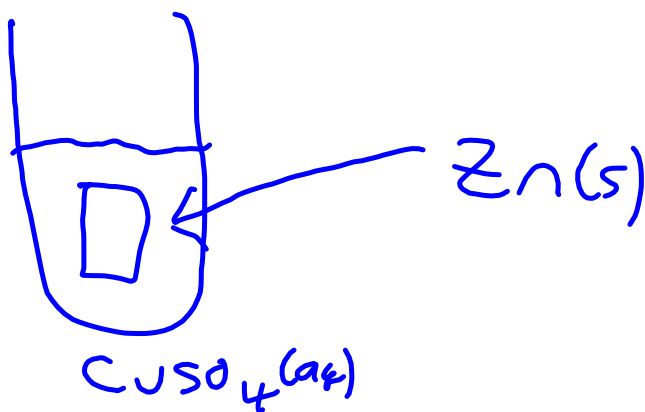
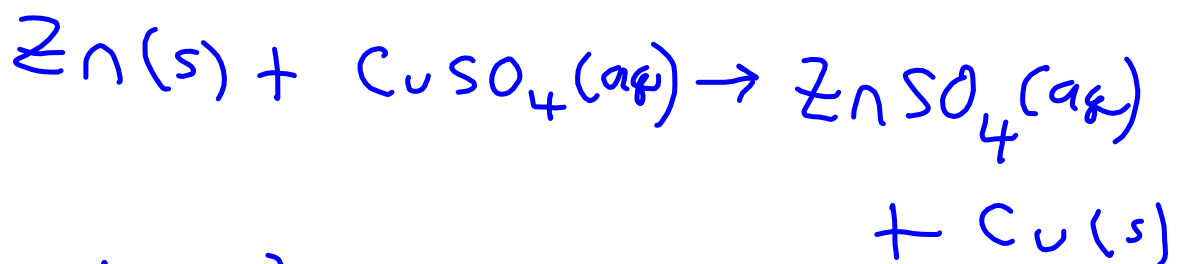


3. Single Replacement (Displacement)

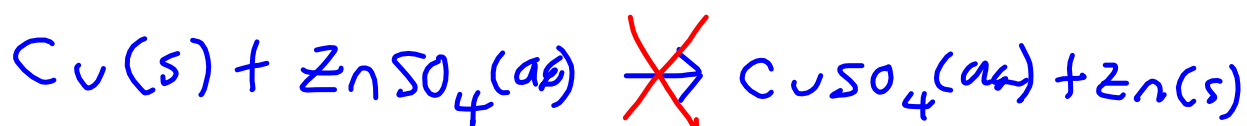
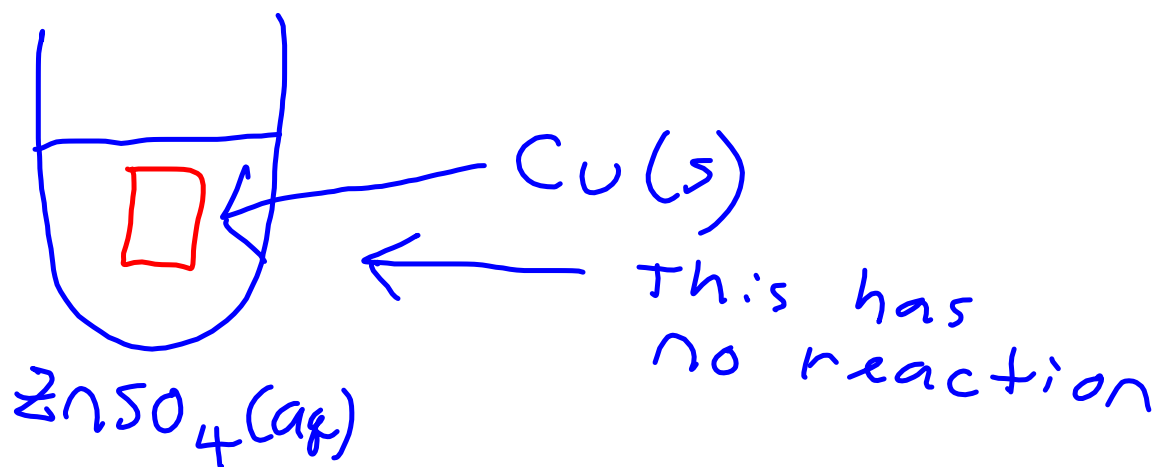
One element replaces another element in a compound.

Zinc + copper(II) sulfate

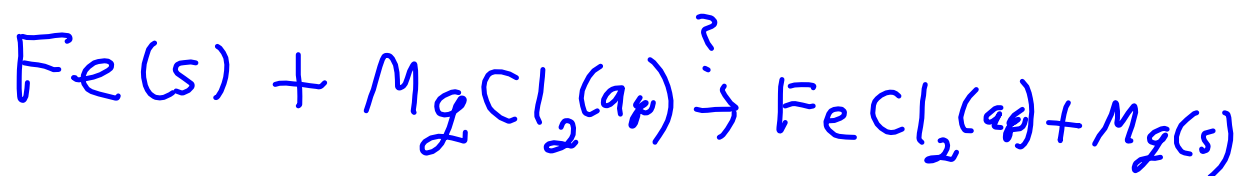
→ zinc sulfate + copper



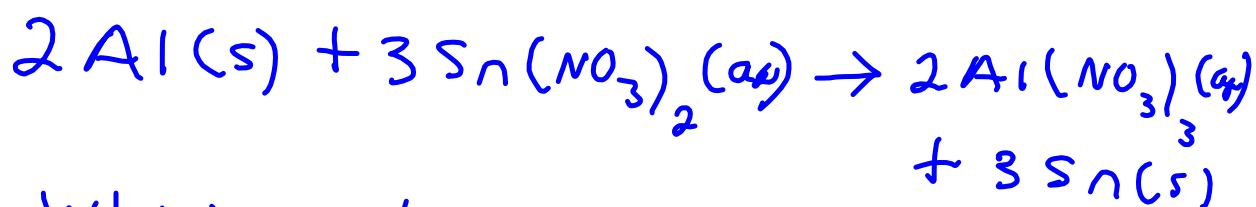
Single replacement reactions tend to occur in one direction only. The more reactive element replaces the less reactive element.



Magnesium is more reactive than iron. Would the following reaction be expected to occur?

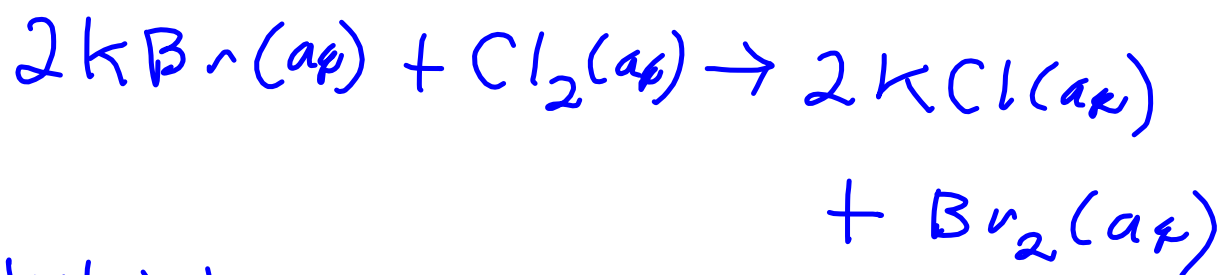


The following reaction is known to occur:



Which metal is more reactive, aluminum or tin?

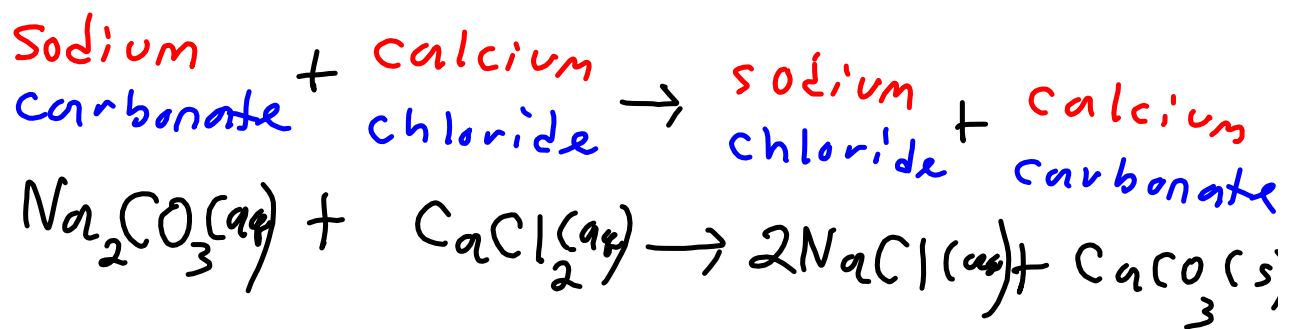
The following reaction
is known to occur:



Which non-metal is more
reactive, bromine or
chlorine?

4. Double Replacement (Metathesis)

An exchange of cations and anions.



5. Combustion

Reaction of a CH or CHO compound ^{with O_2} to produce $\text{CO}_2(\text{g})$ and $\text{H}_2\text{O}(\text{g})$

