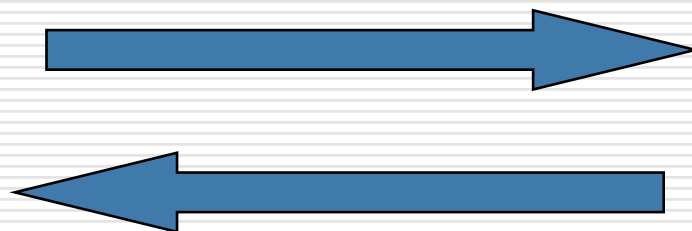


Synthesis & Decomposition

**Two, reciprocal types of
reactions...**

One is the reverse of the other.



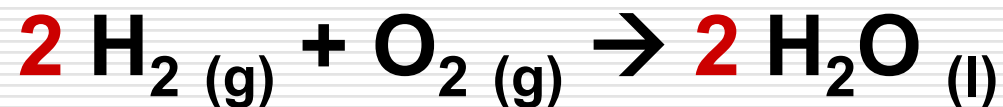
Synthesis

- Making something
- Putting things together
- Assembling

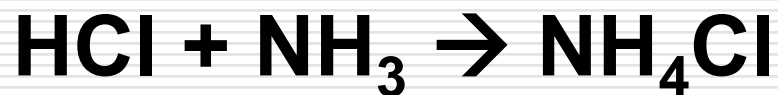


Synthesis

In basic synthesis reactions, it is taking elements and forming compounds:



In more complex synthesis reactions, 2 compounds react to form a new, larger compound:



hydrochloric acid + ammonia → ammonium chloride

Decomposition

- Taking things apart
- Breaking things down
- Separating



Decomposition

In basic decomposition reactions, it is taking compounds apart to leave its separate elements:



In more complex decomposition reactions, one compound is broken down into 2 smaller compounds:



ammonium nitrate \rightarrow nitrous oxide + water
