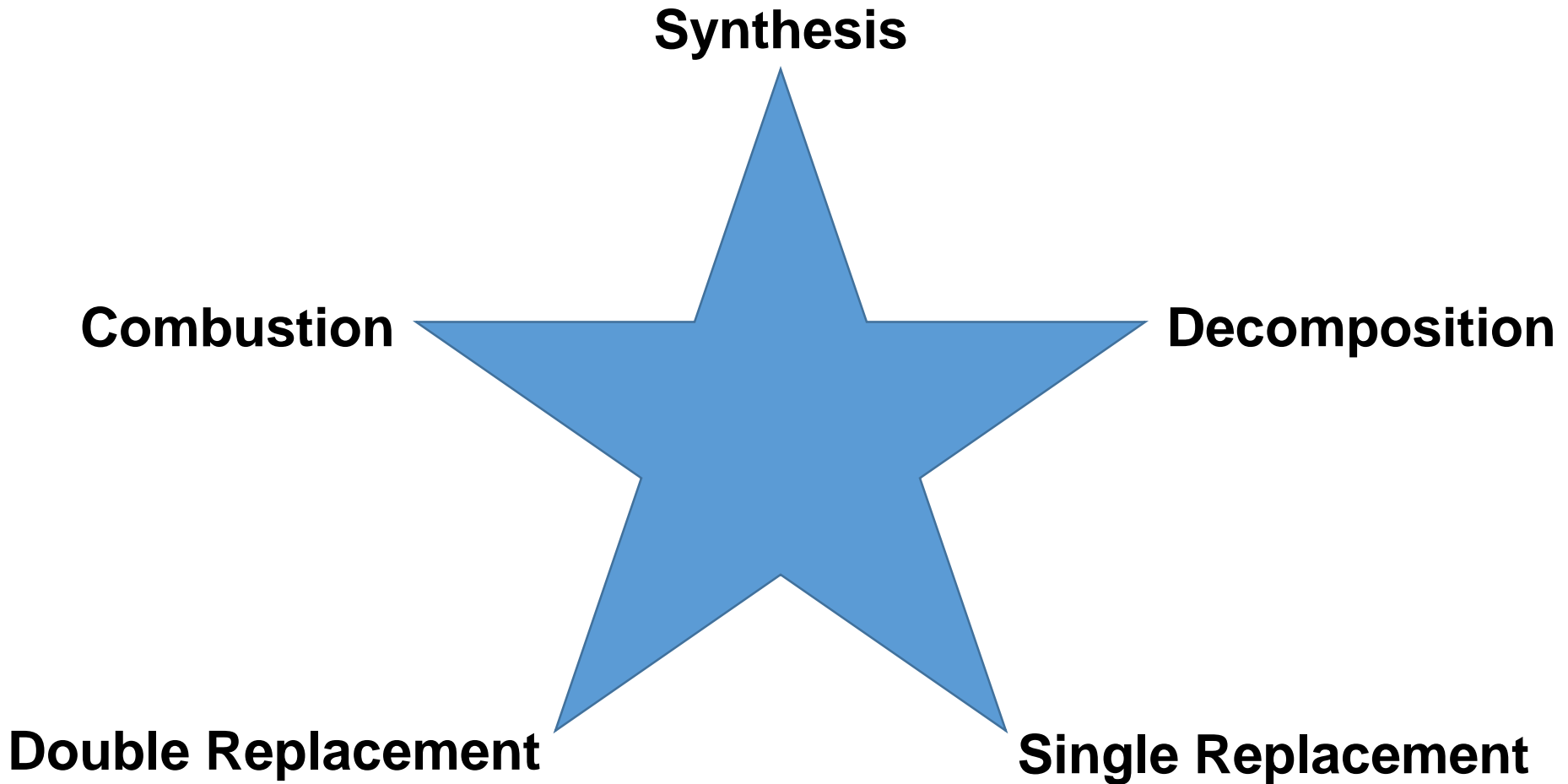


N24- Predicting Products



Steps

- 1) Given words? Turn into formulas**
 - Neutral compounds! Cross over!
 - Diatomics
- 2) Identify type of reaction**
 - Use flow chart to help!
- 3) Write products**
 - Neutral compounds! Cross over from scratch!
 - Diatomics!
- 4) Balance Equation**

Does it happen?

Not all reactions happen in real life!

So many things factor
into if it happens in real life
For this class we will only care about:

Activity Series

Solubility Rules

Activity Series of Metals

- Lithium
- Potassium
- Calcium
- Sodium
- Magnesium
- Aluminum
- Zinc
- Chromium
- Iron
- Nickel
- Lead
- Hydrogen
- Bismuth
- Copper
- Mercury
- Silver
- Platinum
- Gold

- Metals can replace other metals IF they are ABOVE the metal that they are trying to replace
- Metals above hydrogen can replace hydrogen in acids.
- Metals from sodium upward can replace hydrogen in water

Activity Series of Halogens

- Fluorine
- Chlorine
- Bromine
- Iodine

• Halogens can replace other halogens in compounds IF they are ABOVE the halogen that they are trying to replace.



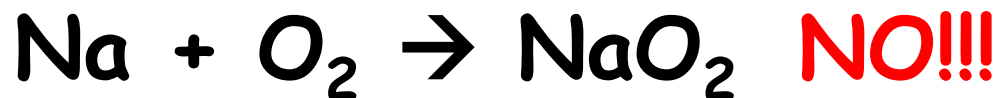
Prediction Products Practice #1

Sodium plus Oxygen yields ???

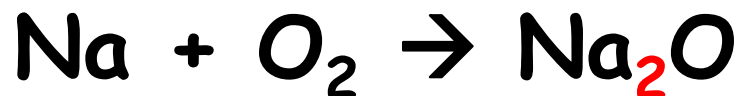


What type of reaction
does this look like?

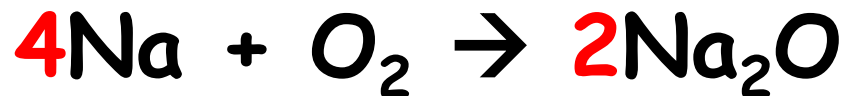
Synthesis



Ionic so cross over!
Don't steal
subscripts!



Fix numbers
with balancing



Prediction Products Practice #2

Sodium chloride breaks into its components



What type of reaction
does this look like?

Decomposition



NO!!!

Diatomic

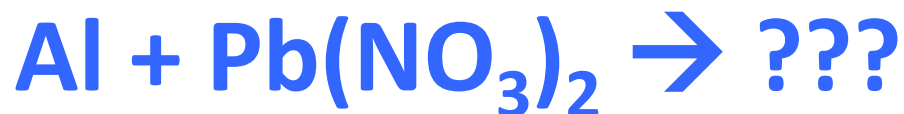


Balance



Prediction Products Practice #3

Aluminum is added Lead(II) Nitrate



Is Al above Pb on Activity Series?

Yes!

What type of reaction does this look like?

Single Replacement

Does Al make cation or anion?

Cation

Ionic so cross over!



Balance



NOT DONE!!!! NEED TO THINK ABOUT PHASES!

Prediction Products Practice #3

NOT DONE!!!! NEED TO THINK ABOUT PHASES!

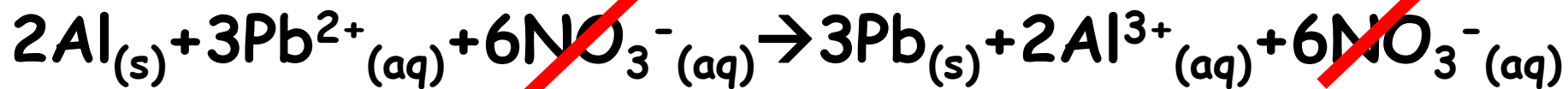
The Balanced Equation



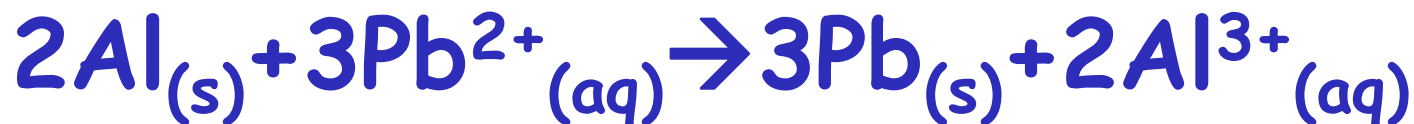
The Overall Equation



The Complete Ionic Equation



The Net Ionic Equation



Spectator
Ions

Prediction Products Practice #4



**NOT DONE!!!! NEED TO
THINK ABOUT PHASES!**

Prediction Products Practice #4

NOT DONE!!!! NEED TO THINK ABOUT PHASES!

The Balanced Equation

The Overall Equation

The Complete Ionic Equation

The Net Ionic Equation

Prediction Products Practice #5

A solution of Silver
Nitrate with a solution
of potassium chloride

**NOT DONE!!!! NEED TO
THINK ABOUT PHASES!**

Prediction Products Practice #5

NOT DONE!!!! NEED TO THINK ABOUT PHASES!

The Balanced Equation

The Overall Equation

The Complete Ionic Equation

The Net Ionic Equation