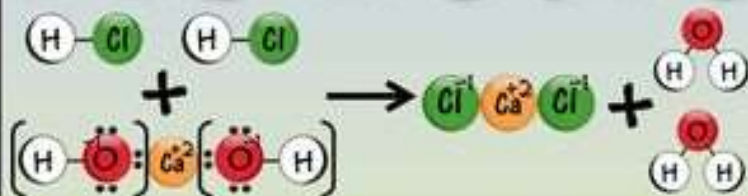
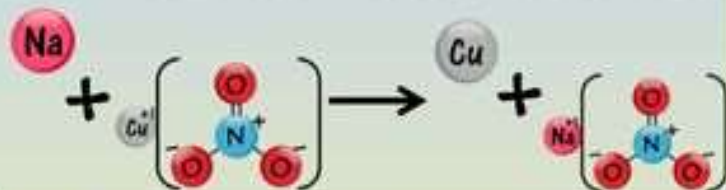


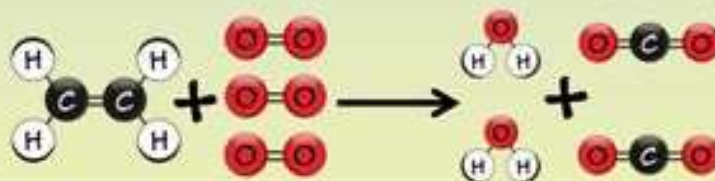
Reaction Types



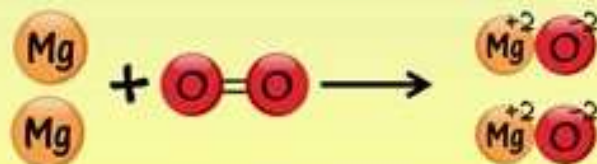
SINGLE REPLACEMENT



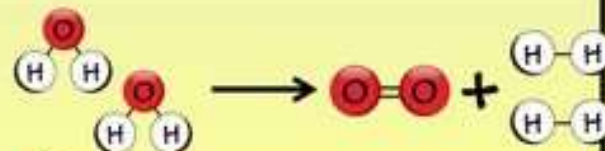
DOUBLE REPLACEMENT



COMBUSTION



ADDITION

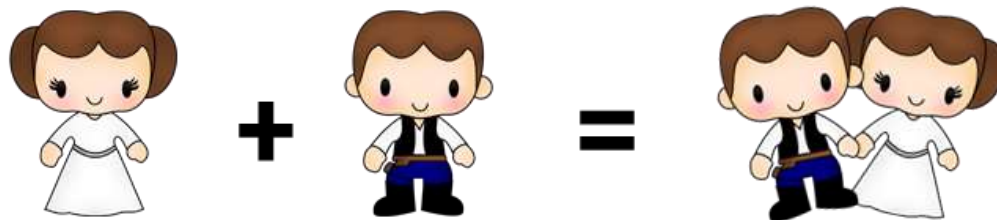
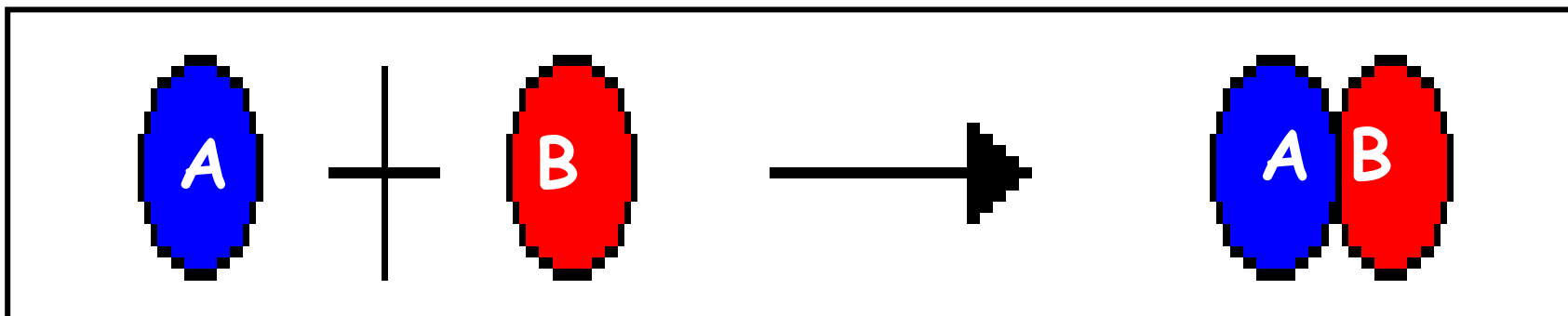


DECOMPOSITION



1. Synthesis (Combination):

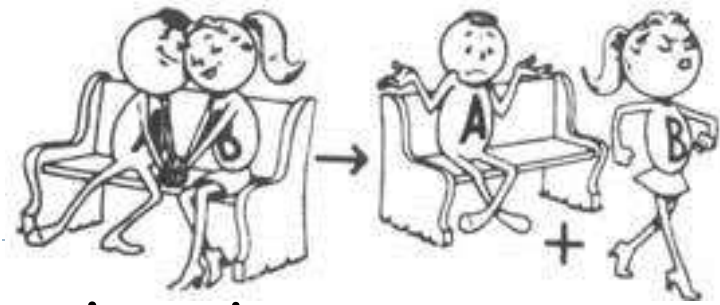
- ▶ Two or more simple substances combine to form one product



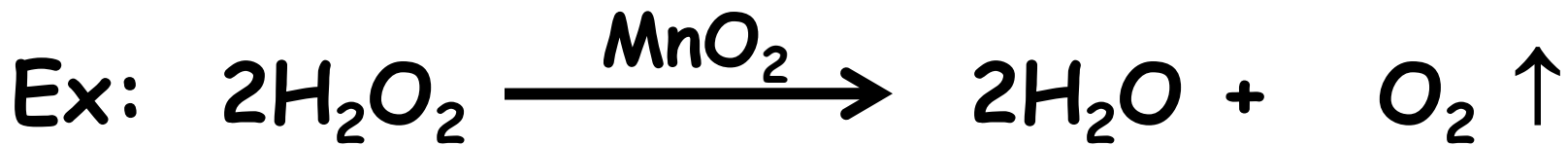
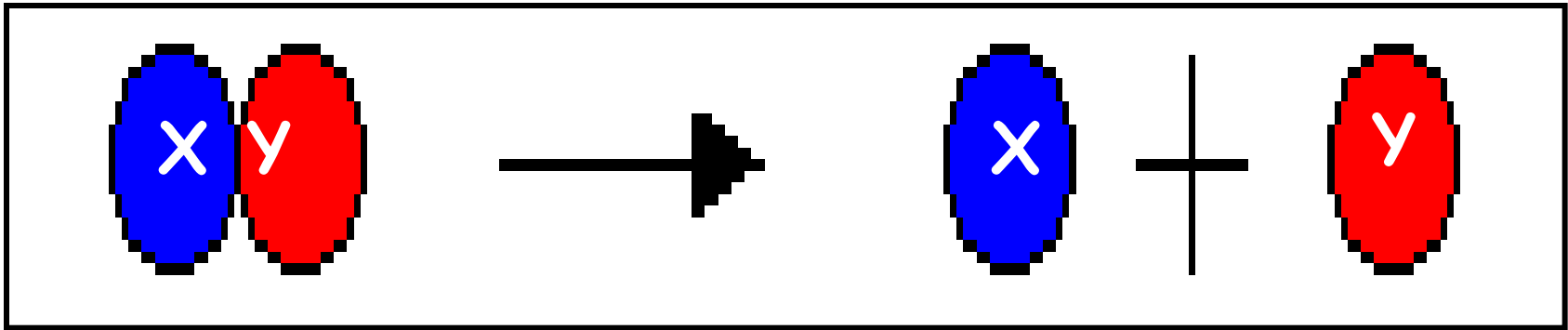
Reaction between sodium and chlorine



2. Decomposition

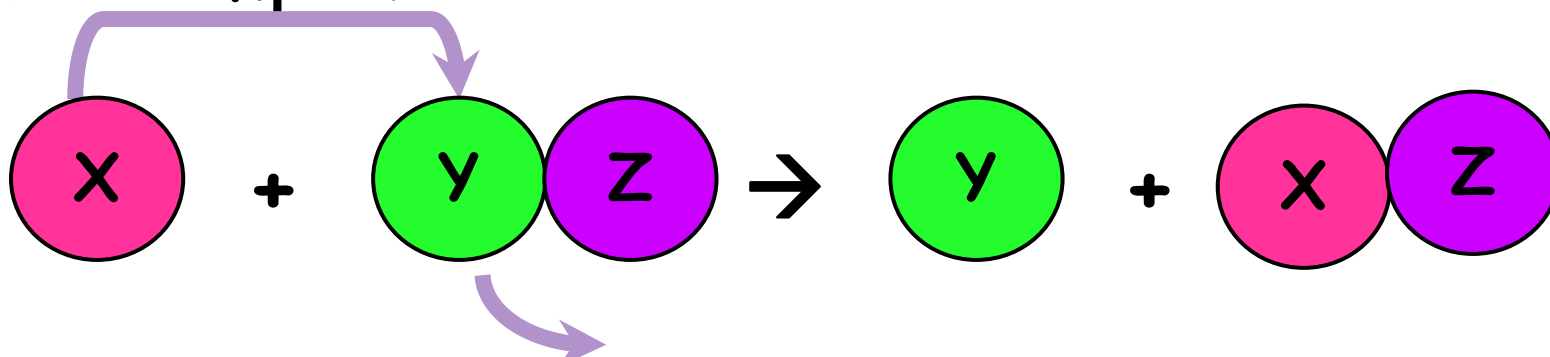


- ▶ One complex reactant breaks down into 2 or more products



3. Single Replacement

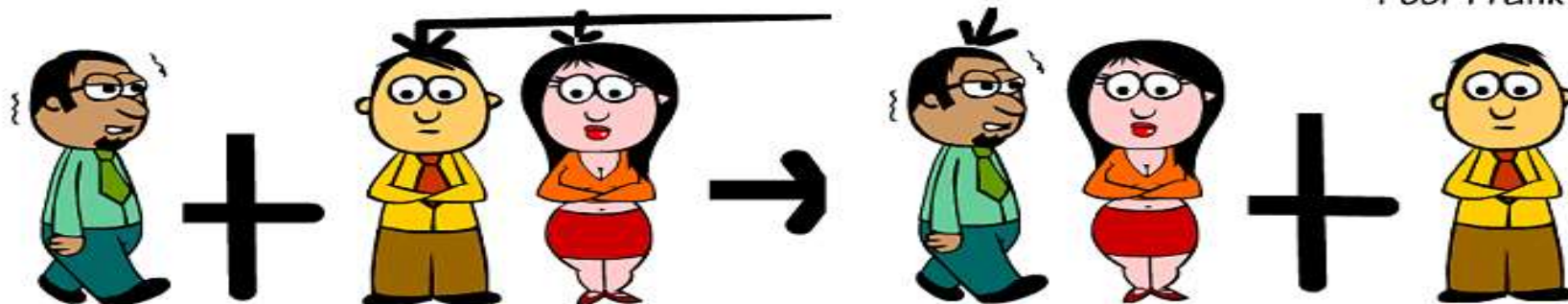
- ▶ one element replaces one of the elements in a compound



SINGLE REPLACEMENT - BY APRILPIERSMA

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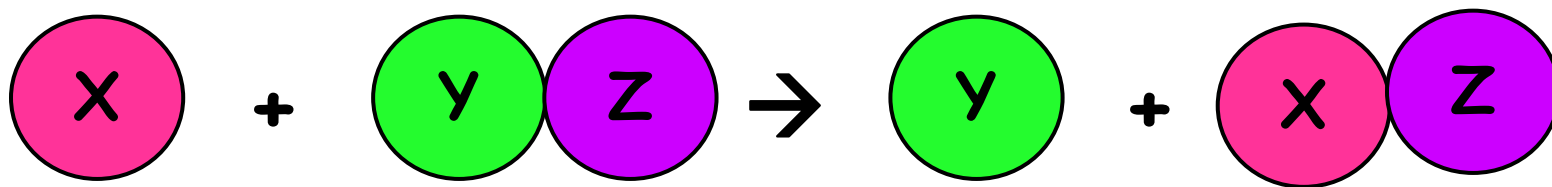
In a single-replacement reaction this girl leaves her guy for Joe.



Now Joe and Mary are together

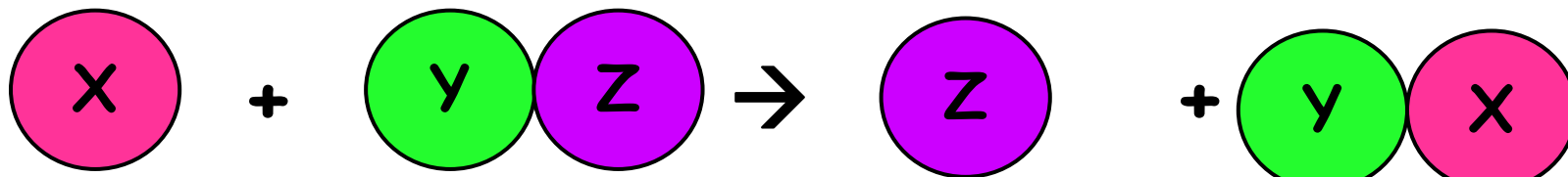
3. Single Replacement

- ▶ Cationic: metal or hydrogen is replaced (first atom is replaced)



3. Single Replacement

- ▶ Anionic: nonmetal is replaced (second atom is replaced)



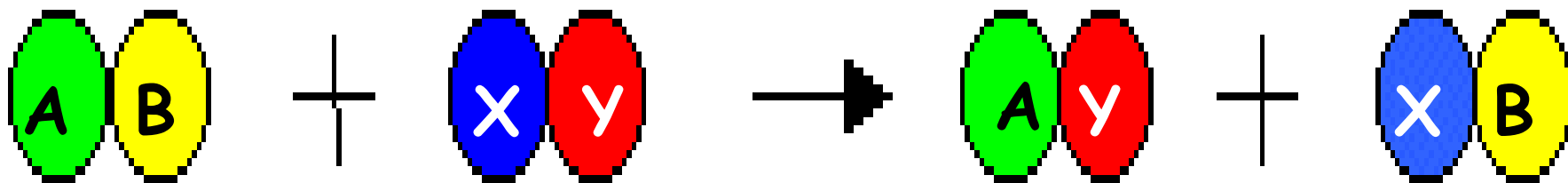
Silver Nitrate on a Penny

- ▶ <https://www.youtube.com/watch?v=qCaPQ2TAQOM>

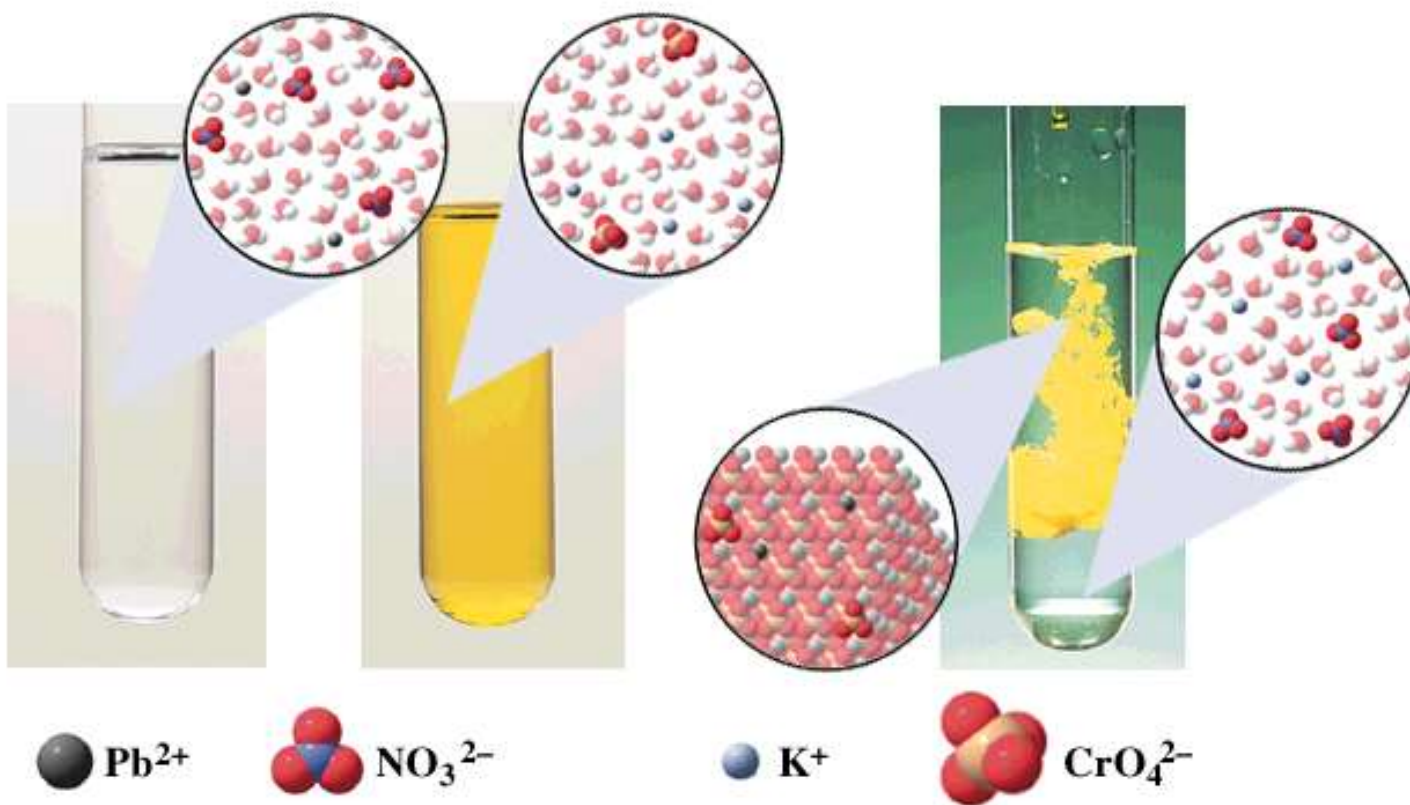


4. Double Replacement

- ▶ The positive ions in two compounds switch partners. Reactions must form a precipitate, water or gas.



Double Replacement




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5. Combustion

- ▶ the burning of any substance by adding oxygen to form a new product



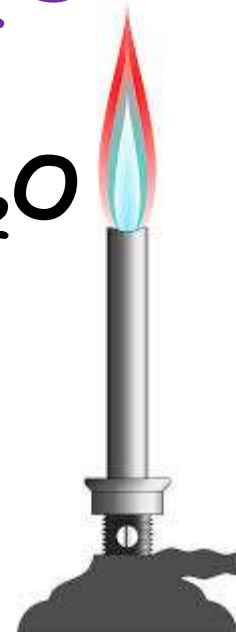
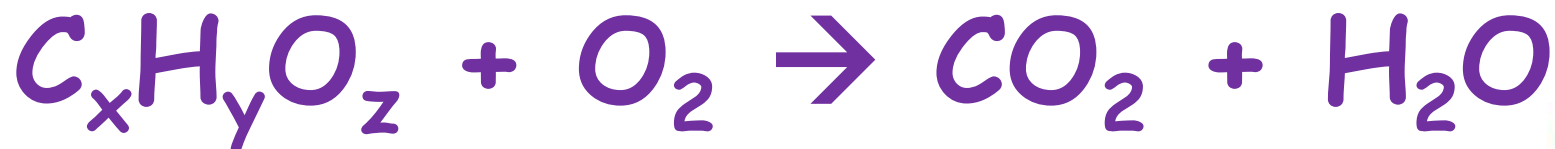

O₂ Reactant

https://www.youtube.com/watch?v=Wmn_3k-XLKc

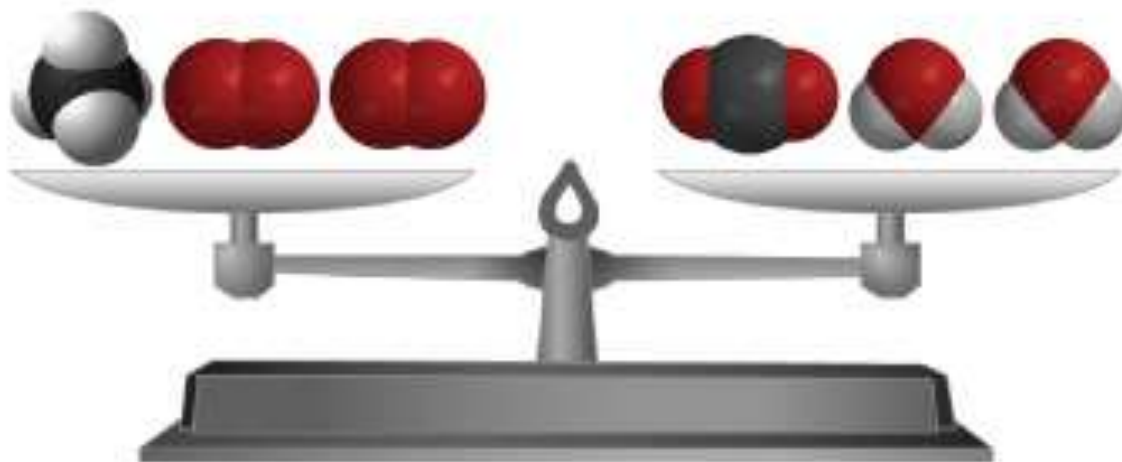


5. Combustion

- ▶ Combustion of hydrocarbons produces $\text{CO}_2 + \text{H}_2\text{O}$



Methane Bubble Demonstration



Whiteboards Please

Classify each of the reactions below as combustion, synthesis, decomposition, single replacement (cationic or anionic) or double replacement.



Answers

