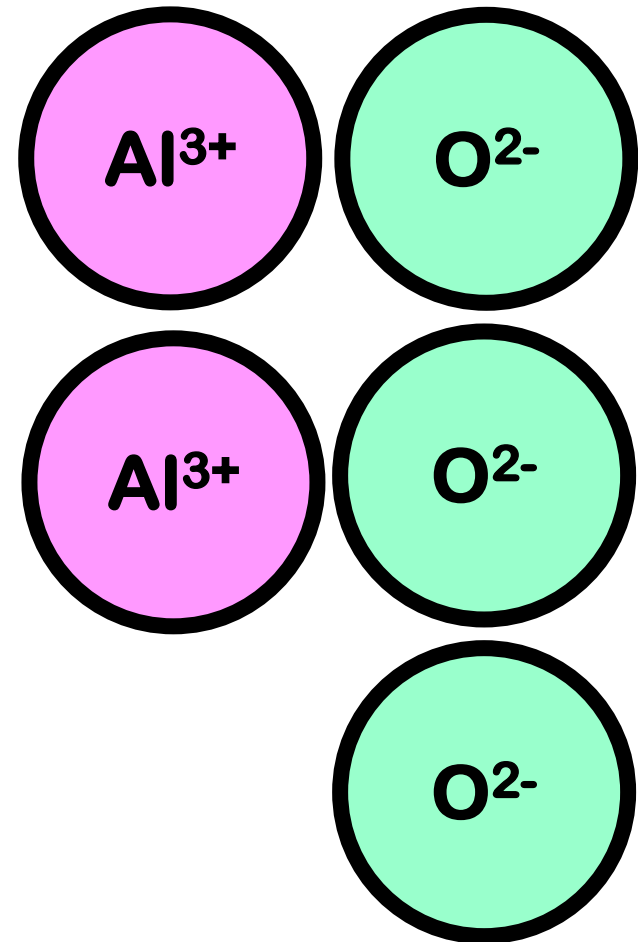
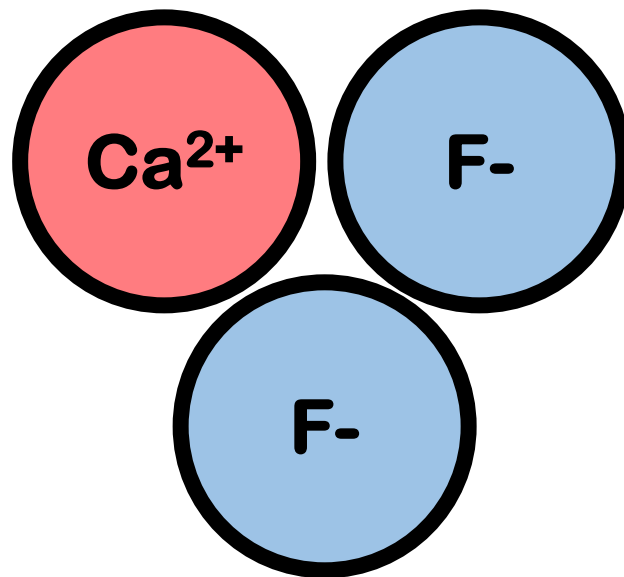
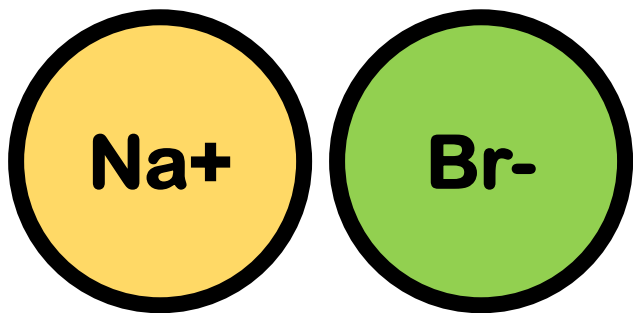


# N17 - Writing Neutral Formulas for Ionic Compounds

*You need to know your  
ions for this!!!!!!!!!!!!!!!!!!!!!!!!!!!!*

# Neutral Compounds

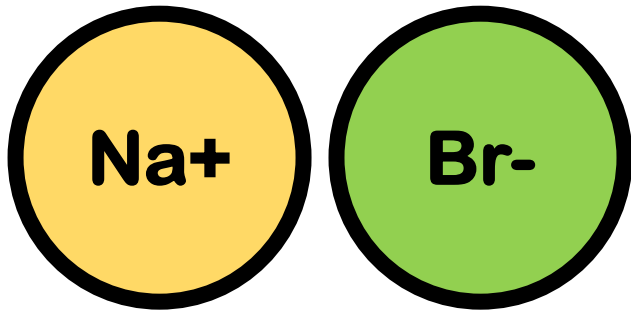
- We need our compounds to be “electrically neutral”
  - Charges need to cancel out
  - Not always a 1:1 ratio!



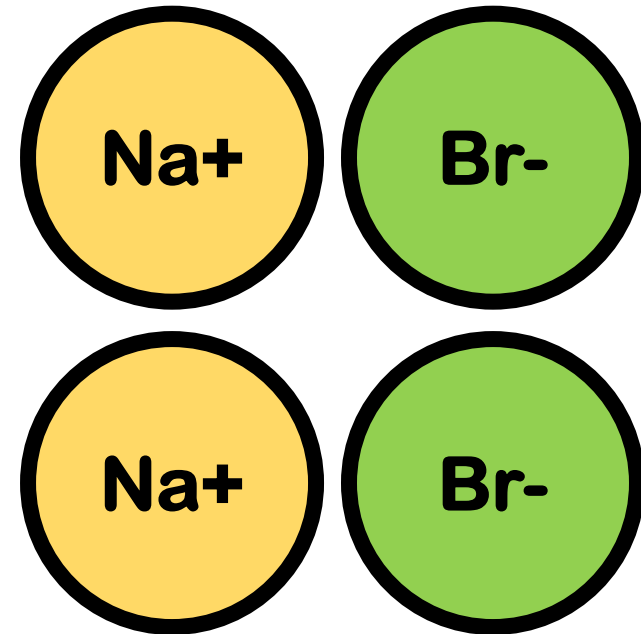
# Neutral Compounds

- Write the lowest possible combo to get neutral

**YES!**



**NO!**

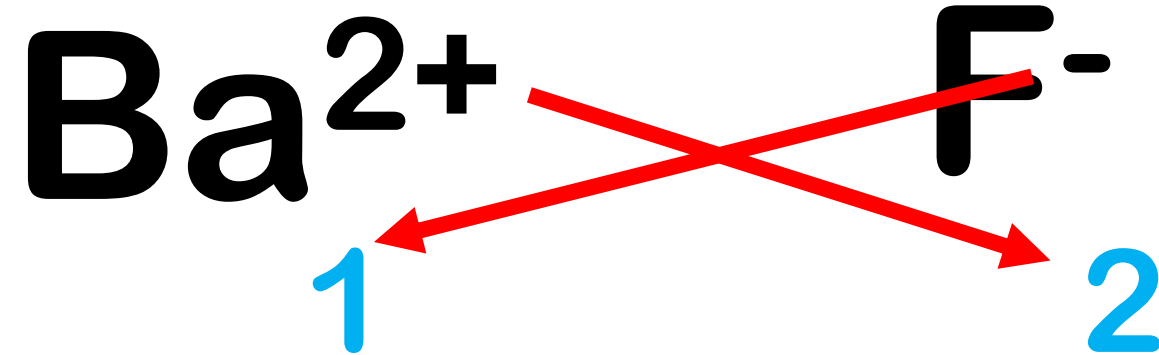


# Steps

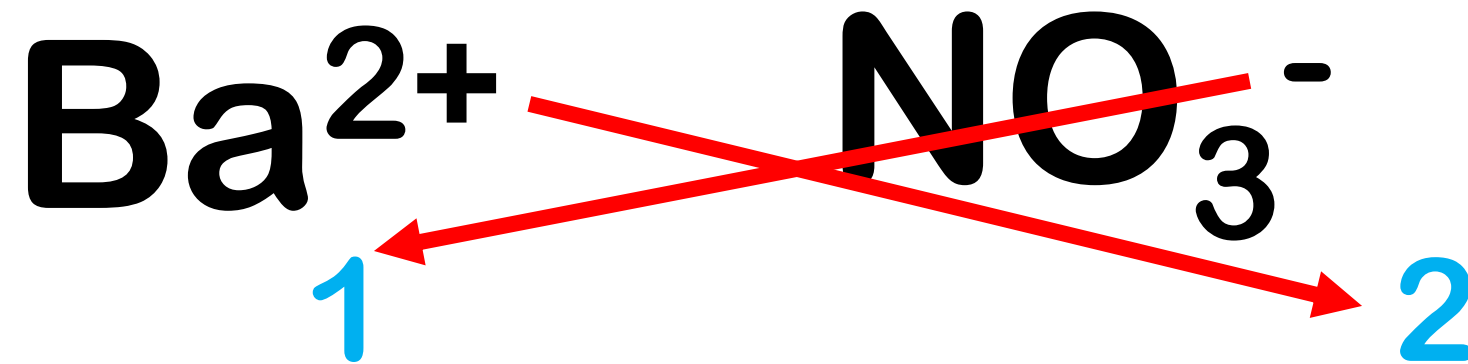
**Eventually we should do this in our head! When asked to show work you will use this “crossing over” method.**

- 1) Write cation first then anion
- 2) Write the charges with each symbol
- 3) The superscript of one atom, becomes the subscript of the other. Use the absolute value! This is “crossing over”
- 4) Reduce your subscripts to the lowest numbers possible while maintaining the correct ratio
- 5) You do not need to put the 1's for subscripts!
- 6) CAREFUL WITH **POLYATOMIC IONS!**
  - a) Use parentheses IF  $> 1$  is needed only. No parentheses IF  $= 1$  is needed

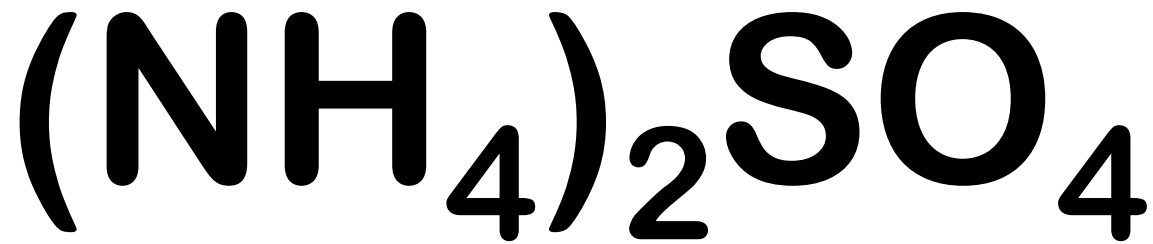
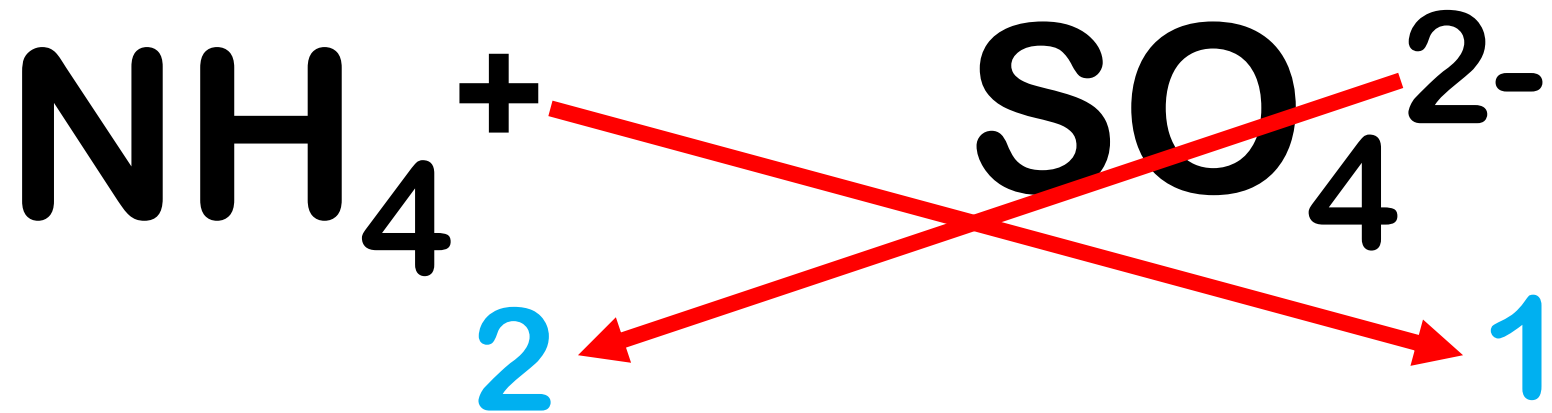
# Barium Fluoride



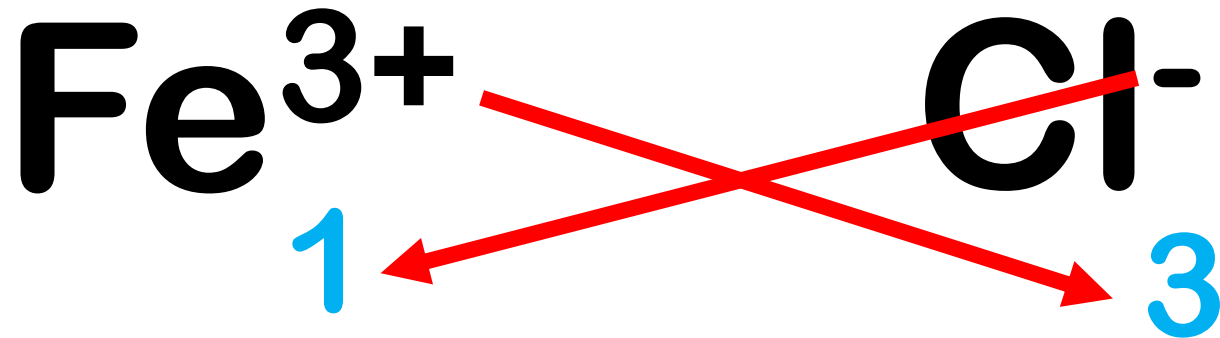
# Barium Nitrate



# Ammonium Sulfate

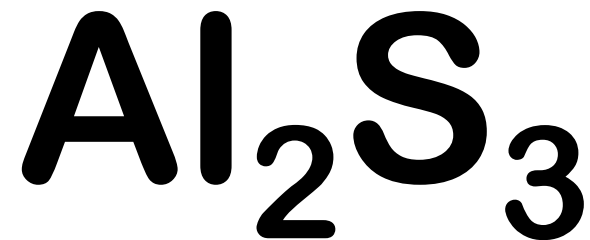
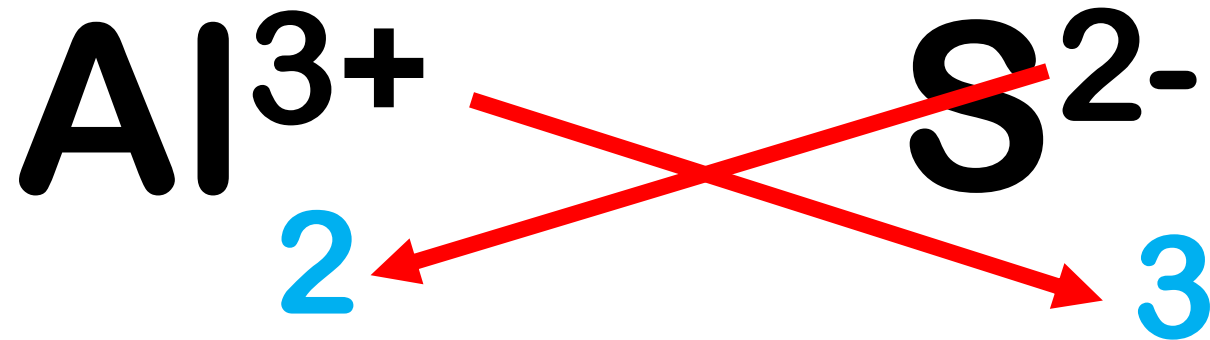


# Iron(III) Chloride

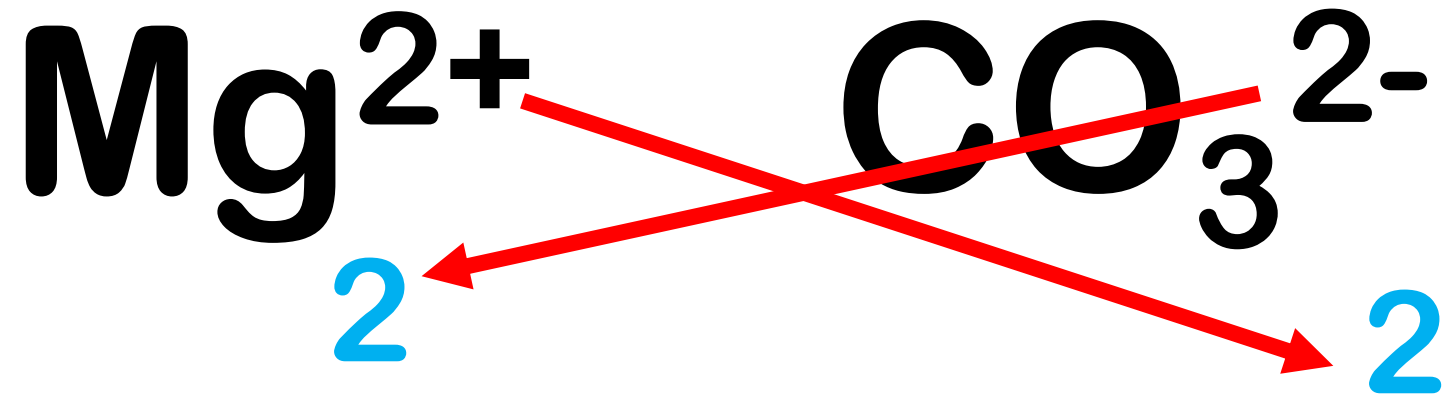




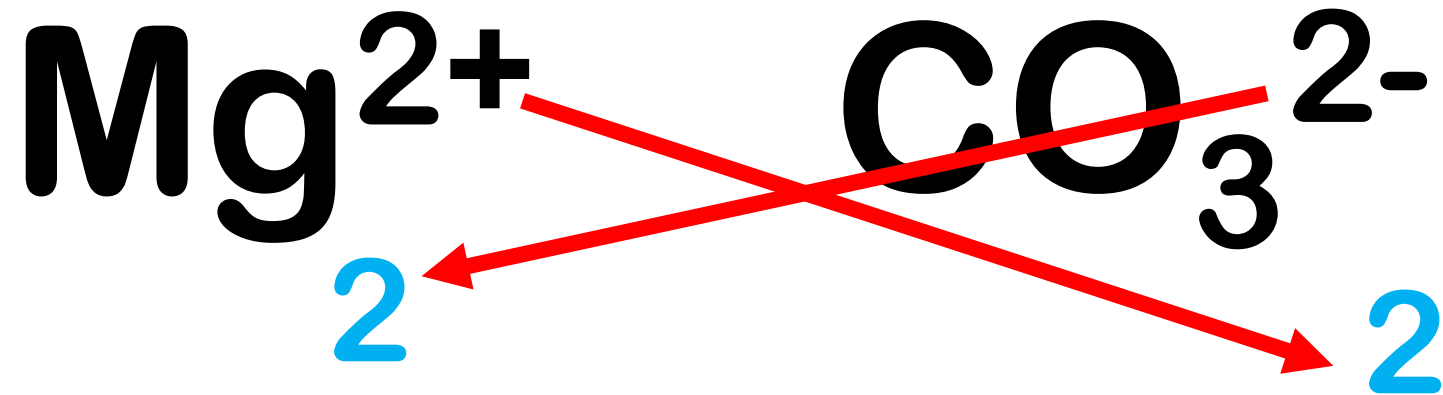
# Aluminum Sulfide



# Magnesium Carbonate

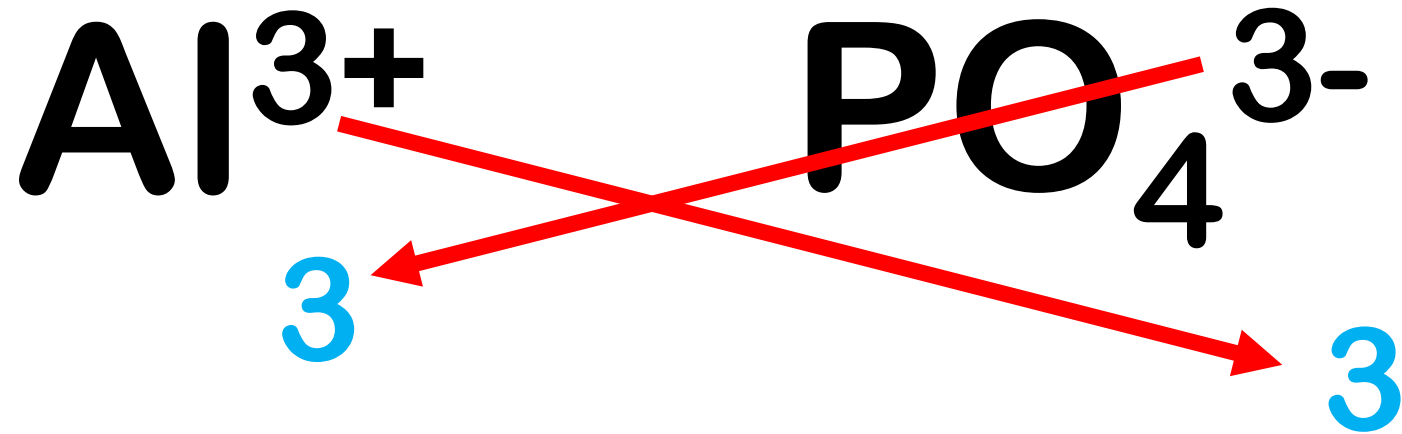


# Magnesium Carbonate





# Aluminum Phosphate



# Aluminum Phosphate

