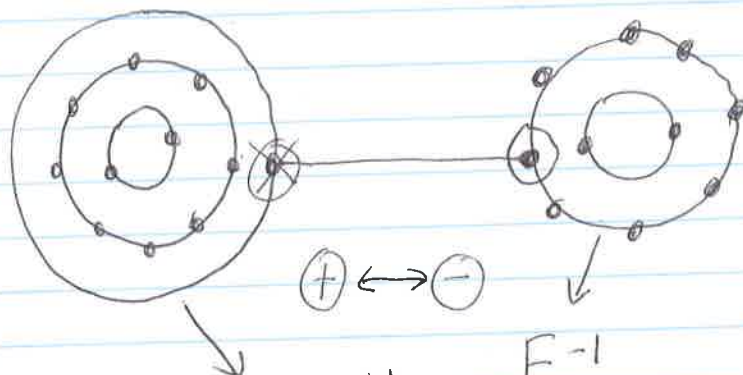


Ionic Bonds - are bonds in which electrons are transferred from one atom to another and then positive and negative ions are attracted to each other.

Sodium (Na)

FLUORINE (F)

neutral
 $11p^+$
 $11e^-$
 \emptyset charge



neutral
 $9p^+$
 $9e^-$
 \emptyset charge

Na^+ ion
 $11p^+$
 $10e^-$
 $+1$ charge

Na^+
 F^-
 NaF
 sodium fluoride

F^- ion
 $9p^+$
 $10e^-$
 -1 charge

Positive ions are called cations: $\#p > \#e$

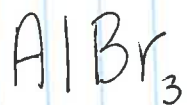
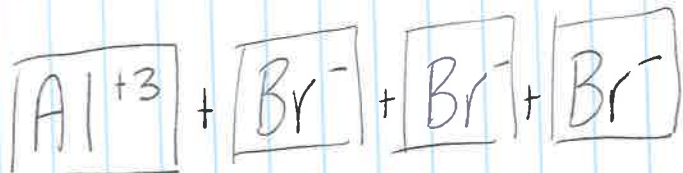
Negative ions are called anions: $\#p < \#e$

Polyatomic ions - group of covalently bonded atoms with an overall positive or negative charge.

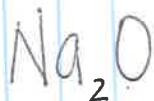
$(NH_4)^+$ ammonium
 polyatomic cation

$(PO_4)^{3-}$ phosphate
 polyatomic anion

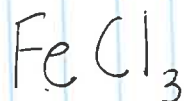
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Combining Ionsie Chemical compounds have an overall neutral charge.Cations + AnionsChemical FormulaName of Compound

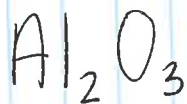
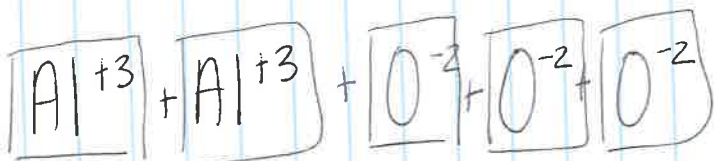
aluminum bromide



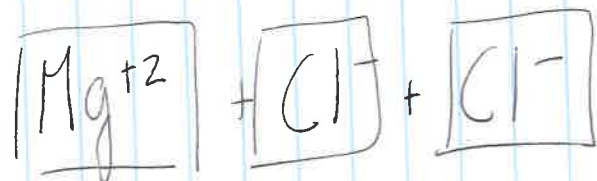
sodium oxide



iron (III) chloride



aluminum oxide



magnesium chloride