Balancing Chemical Equations Help Sheet

Elemental Anions	Polyatomic Ions	Diatomic Gases
C^{4-} carbide	CO_3^{2-} carbonate	H_2
N^{3-} nitride	NO_3^{1-} nitrate	N_2
O^{2-} oxide	PO_4^{3-} phosphate	O_2
F^{1-} fluoride	SO_4^{2-} sulphate	F_2
P^{3-} phosphide	ClO_3^{1-} chlorate	Cl_2
S^{2-} sulphide	OH^{1-} hydroxide	
Cl^{1-} chloride	CN^{1-} cyanide	
As^{3-} arsenide		
Se^{2-} selenide	NH_4^{1+} ammonium	
Br^{1-} bromide		
Sb^{3-} antimonide		
Te^{2-} telluride		
I^{1-} iodide		

How to Build a Formula:

cation / anion ➔	FeS	$AlCO_3$	MgOH	KCN
consider the charges ➔	$Fe^{3+}S^{2-}$	$Al^{3+}CO_3^{2-}$	$Mg^{2+}OH^{1-}$	$K^{1+}CN^{1-}$
balance the formula ➔	Fe_2S_3	$Al_2(CO_3)_3$	$Mg(OH)_2$	KCN

DON'T ATTEMPT TO BALANCE UNTIL YOU HAVE THE FORMULAS!!!

WHEN BALANCING IT IS OFTEN NECESSARY TO MAKE ODD NUMBERS OF ATOMS EVEN