

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 ₂ S 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**