

3. Balancing Chemical Equations

A. Law of conservation of mass

mass cannot be created or destroyed
in a chemical reaction

$$\text{mass of reactants} = \text{mass of products}$$

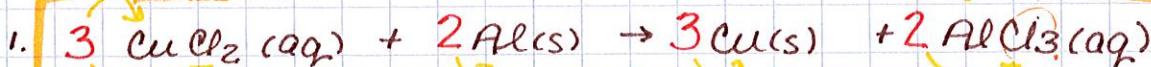
in terms of balancing, you MUST
have the same # of atoms of each
element on both sides of the equation.

B. Balancing

use COEFFICIENTS to balance equations

↓
numbers written in front of a formula
that multiply through every element
in that formula.

Examples



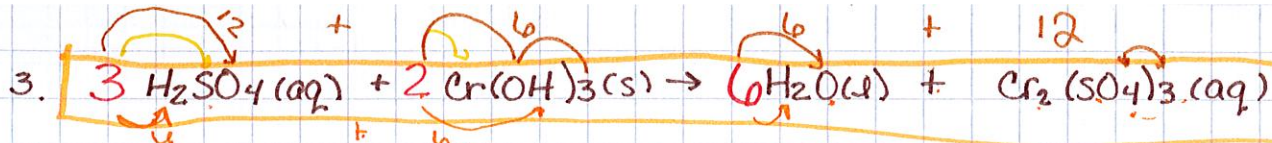
Cu + 3
Cl 2 6
Al + 2

Cu + 3
Cl 3 6
Al + 2



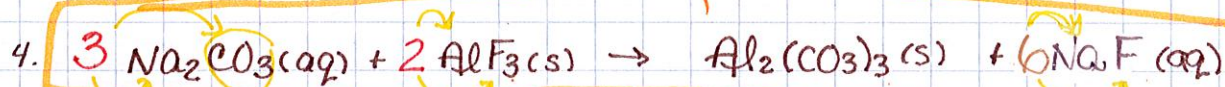
N 2
H 2 6

N + 2
H 3 6



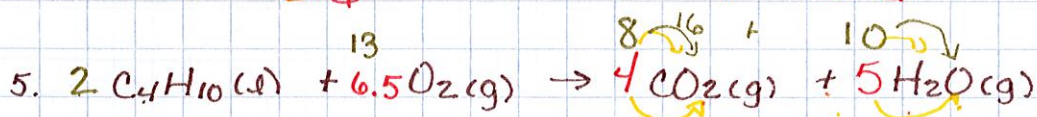
H 5 12
S +3
O 7 18
Cr +2

H 2 12
S 3
O 13 18
Cr 2



Na 2 6
(CO₃) +3
Al +2
F 3 6

Na +2 6
(CO₃) 3
Al 2
F +6



C 4 8
H 10 20
O 2 13 26

C +4 8
H 2 10 20
O 3 13 26

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