

Balancing Equations by Inspection

1. Do not add new species or change the formulas of given species in the skeletal reaction.
2. First balance elements that occur in only one reactant and one product (if such exist).
3. Fractional coefficients may be useful in achieving a balance (e.g., when a diatomic reactant yields an odd number of atoms in product molecules), but in general fractions should be cleared by multiplying both sides of the equation by a suitable constant.
4. If polyatomic ions or fragments of such occur as both reactants and products, treat them as discrete units (i.e., don't break them up).
5. Check element by element to be sure that the same numbers of each element occur on both sides of the equation (i.e., make sure the equation is really balanced).