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).