These are the rules that are presented in lecture; they correspond to table 4.2 in Chemistry, 7th ed.*, Zumdahl & Zumdahl.*

ASSIGNING OXIDATION NUMBERS

1. an atom in an **element = 0** (Mg, Cl_2, Hg, N_2...)
2. a monatomic **ion = charge on ion** (Mg^{2+}, Cl^-, O^{2-}, Fe^{3+}...)
3. **fluorine = -1** (HF, CF_4, ...)
4. **oxygen = -2** (H_2O, CO_2, ...); except peroxide = O_2^{2-} = -1 (H_2O_2, NaO,...)
5. **hydrogen = +1** (H_2O, NH_3,...); except hydride = H^{1-} = -1 (LiH, MgH_2,…)
6. total oxidation number on a **compound = 0**
7. total oxidation number on a **polyatomic ion = charge on ion** (PO_4^{3-} = -3 total, OH^-=-1 total, NH_4^+=+1total...)

*For exams and quizzes, you'll be required to **memorize rules 1, 2, 6 & 7**; rules 3-4 will be provided on quizzes and exams:*

ASSIGNING OXIDATION NUMBERS (provided on quizzes and exams)

1. (*required memorization*)
2. (*required memorization*)
3. **fluorine = -1**
4. **oxygen = -2**; except peroxide = O_2^{2-} = -1
5. **hydrogen = +1**; except hydride = H^{1-} = -1
6. (*required memorization*)
7. (*required memorization*)