

Balancing Redox Reactions using the $\frac{1}{2}$ Reaction Method

Half Reaction

- _____ – one of the two parts of a redox reaction
- One half will be oxidation
- One half will be reduction

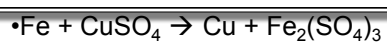
Step to Balancing Half Reaction Method

1. Separate the reactions into 2 half reactions (one for oxidation & one for reduction)
2. Balance each $\frac{1}{2}$ reaction un the following order:
 - a) Balance elements other than H & O
 - b) Balance O by adding H_2O
 - c) Balance H by adding H^+
 - d) Balance the charge to make each side equal

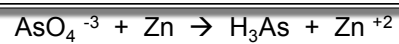
Step to Balancing Half Reaction Method

3. Multiply each $\frac{1}{2}$ reaction by a number to make the number of electrons gained = the number of electrons lost
4. Add the $\frac{1}{2}$ reactions
5. Simplify
6. Check your work

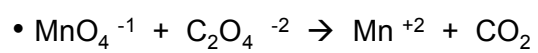
Example



Another Example



Try This one...



Last one...

