

## 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

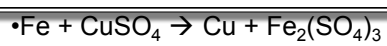
## Step to Balancing Half Reaction Method

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

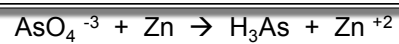
## Step to Balancing Half Reaction Method

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

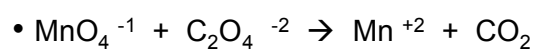
### Example



### Another Example



### Try This one...



### Last one...

