

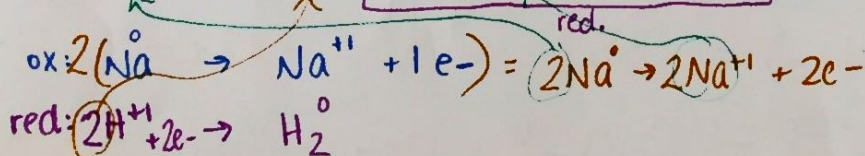
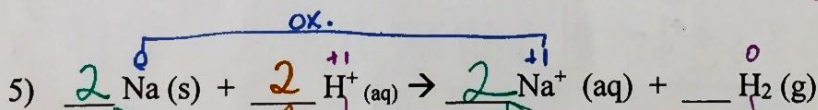
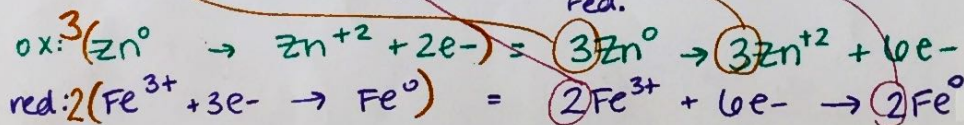
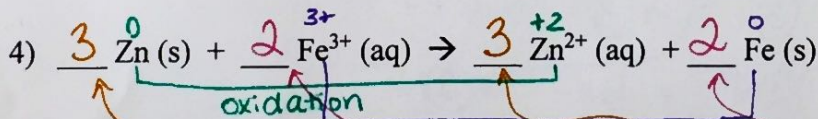
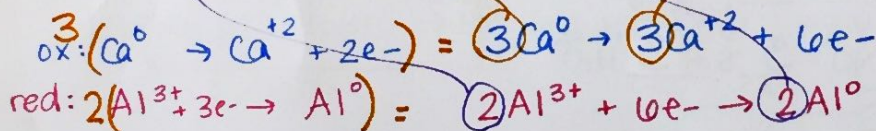
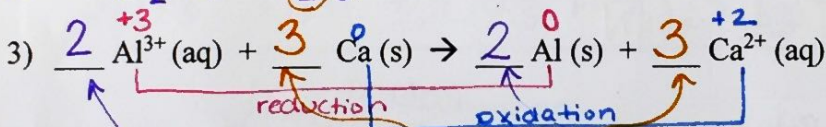
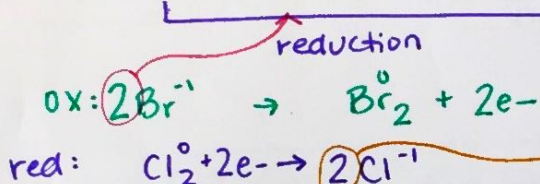
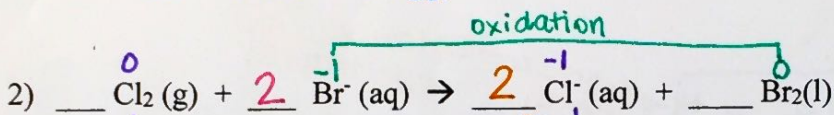
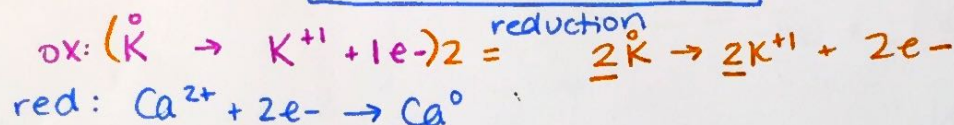
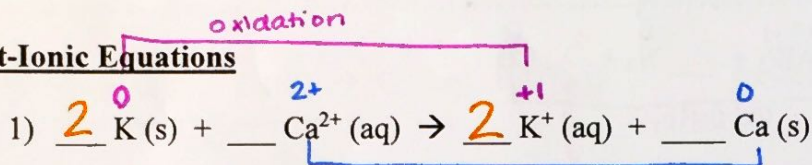
BALANCING REDOX REACTIONS WORKSHEET (HC)

Key

STEPS TO BALANCING REDOX REACTIONS

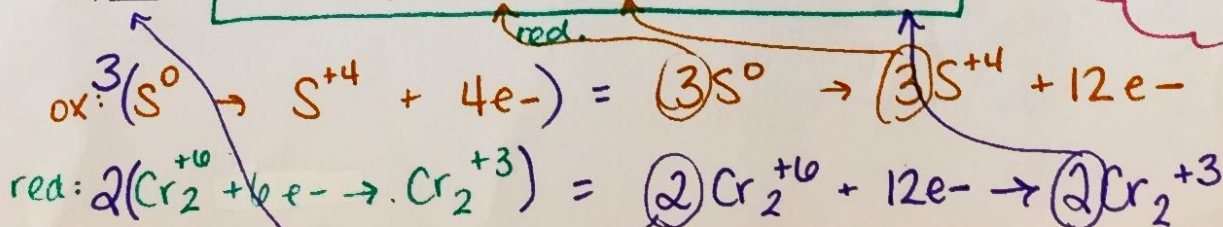
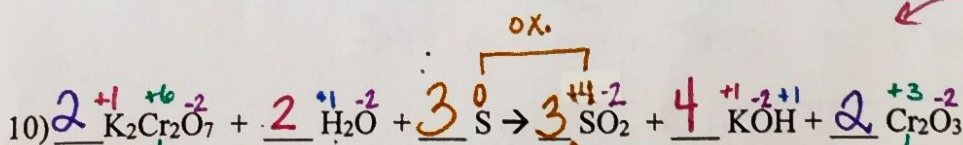
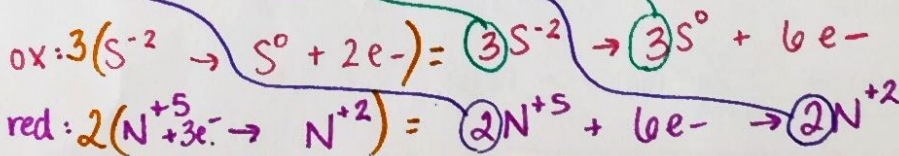
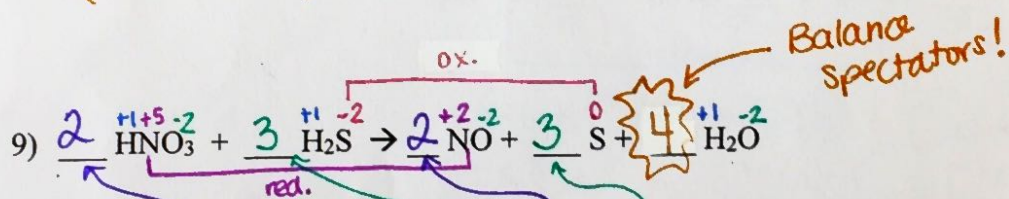
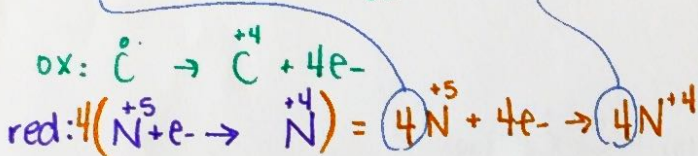
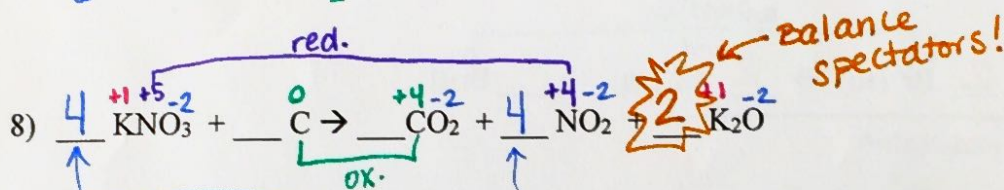
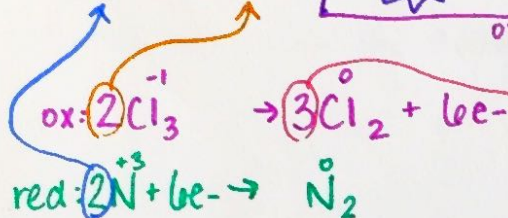
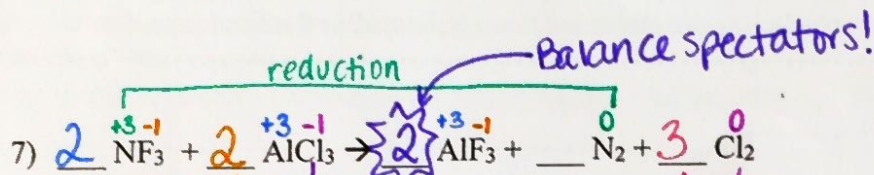
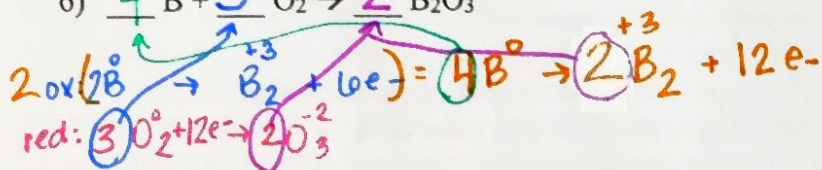
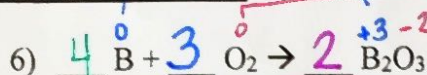
1. Assign oxidation numbers.
2. Identify the oxidized and reduced species.
3. Separate the reaction into the appropriate half-reactions.
4. Balance each half-reaction by mass (apply coefficients).
5. Balance each half-reaction by charge (adding electrons to appropriate side).
6. Make electrons lost equal to electrons gained (multiply entire equation by a factor if needed)
7. Add together the half-reactions (and transfer any coefficients to the original equation).
8. Check that all elements (including spectator ions) are balanced in the final equation.

Net-Ionic Equations



Remember to balance your spectator ions

Molecular Equations



STEPS TO BALANCING REDOX REACTIONS IN ACIDIC SOLUTION

1. Assign oxidation numbers.
2. Identify the oxidized and reduced species.
3. Separate the reaction into the appropriate half-reactions (keep entire species together).
4. Balance each half-reaction by mass (apply coefficients).
5. Balance each half-reaction by charge (adding electrons to appropriate side).
6. *Balance the oxygen atoms by adding H₂O to the appropriate side of each half reaction*
7. *Balance the hydrogen atoms by adding H⁺ to the appropriate side of each half reaction*
8. Make electrons lost equal to electrons gained (multiply entire equation by a factor if needed)
9. Write the overall equation.
10. Check that all elements (including spectator ions) are balanced in the final equation.

