

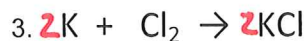
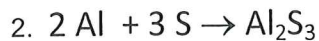
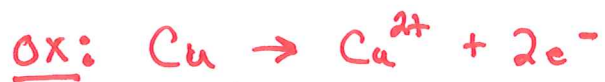
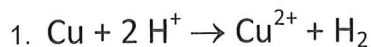
Using Half-Reactions

Honors Chemistry

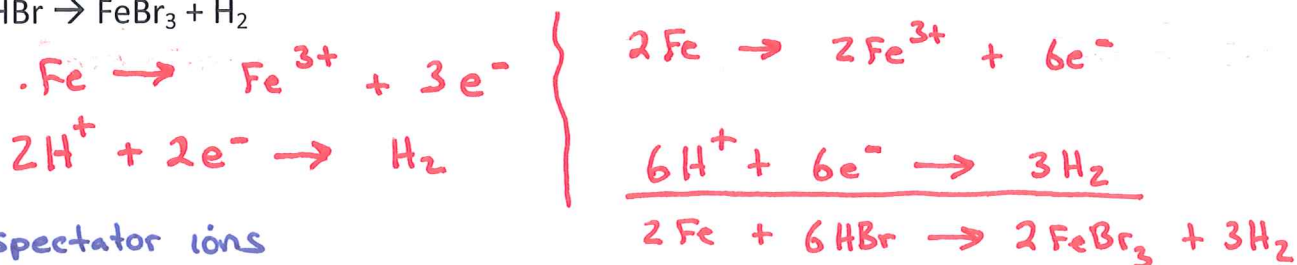
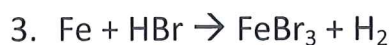
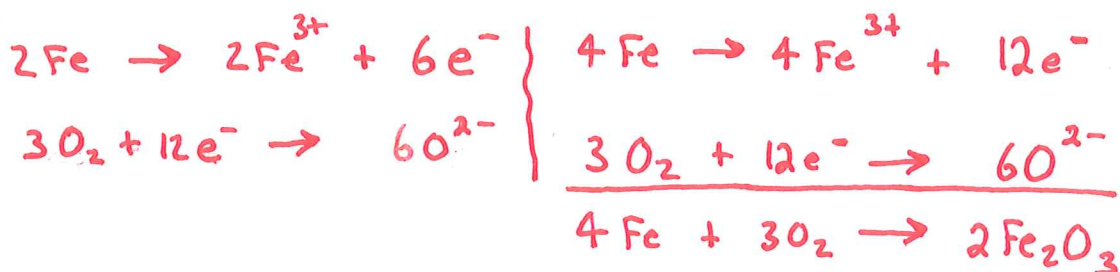
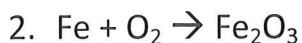
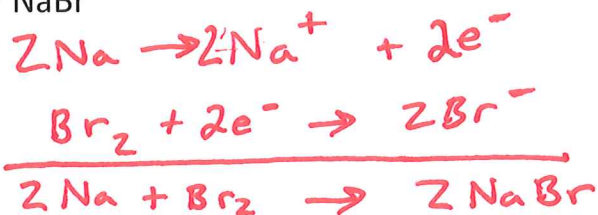
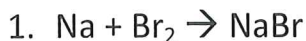
Identify each as either an oxidation or reduction. Balance the following half-reactions for both atoms and electrons by adding the appropriate number of electrons to the correct side of the equation.

- | | | | |
|----|-------------------------------------|-------------------------|------------------|
| 1. | $\text{Pb}^{2+} + 2e^- \rightarrow$ | Pb | <u>Reduction</u> |
| 2. | Na \rightarrow | $\text{Na}^+ + 1e^-$ | <u>Oxidation</u> |
| 3. | $\text{Mg}^{2+} + 2e^- \rightarrow$ | Mg | <u>Reduction</u> |
| 4. | Fe \rightarrow | $\text{Fe}^{3+} + 3e^-$ | <u>Oxidation</u> |
| 5. | $2\text{Cl}^- \rightarrow$ | $\text{Cl}_2 + 2e^-$ | <u>Oxidation</u> |
| 6. | K \rightarrow | $\text{K}^+ + 1e^-$ | <u>Oxidation</u> |
| 7. | $\text{O}_2 + 4e^- \rightarrow$ | 2O^{2-} | <u>Reduction</u> |
| 8. | $2\text{F}^- \rightarrow$ | $\text{F}_2 + 2e^-$ | <u>Oxidation</u> |

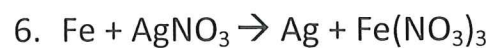
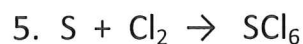
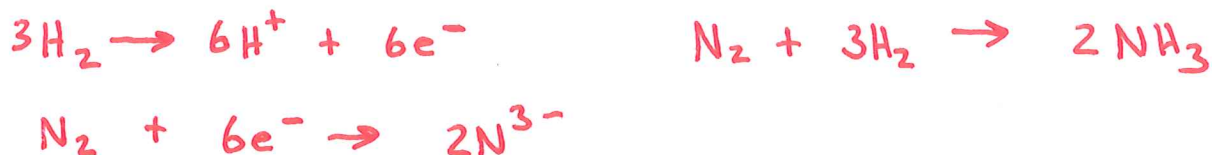
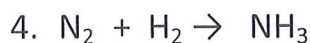
Break each equation into two half-reactions. Identify each half-reaction as oxidation or reduction



Balance each Oxidation-Reduction reaction using the half-reaction method. Show all work!



Br^- = spectator ions



NO_3^- = spectator ions