

Mock Test

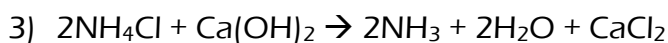
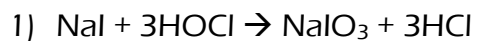
Part 1: Determining Oxidation Numbers

Instructions: Determine the oxidation number of each bolded element in the following substances.

- | | | |
|--------------------------------------|---------------------------------------|--|
| 1. Co in CoCl_2 _____ | 6. As in As_4 _____ | 11. Fe in $\text{Fe}_3(\text{PO}_4)_2$ _____ |
| 2. C in COCl_2 _____ | 7. P in H_3PO_3 _____ | 12. Cr in $\text{Cr}_2\text{O}_7^{2-}$ _____ |
| 3. Mn in MnO_4^- _____ | 8. Ca in Ca^{2+} _____ | 13. O in OF_2 _____ |
| 4. O in K_2O_2 _____ | 9. O in RbO_2 _____ | 14. Cl in ClO_4^- _____ |
| 5. Br in HBrO _____ | 10. Br in MgBr_2 _____ | 15. H in CaH_2 _____ |

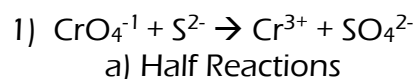
Part 2: Identifying Redox Reactions

Instructions: Determine which of the following equations represent redox reactions. **MUST SHOW OXIDATION NUMBERS** for full credit! If it is a redox reaction, determine which element is oxidized and which is reduced.



Part 3: Writing Half Reactions & Balancing Redox Reactions

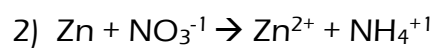
Instructions: Write the half reactions for each of the following equations. Identify which reaction is oxidation and which is reduction. Next balance it under acidic conditions. Finally, balance it under basic conditions.



b) Which reaction oxidized? Which reaction is reduced?

c) Balanced Redox in Acidic Conditions

d) Balanced Redox in Basic Conditions



a) Half Reactions

b) Which reaction oxidized? Which reaction is reduced?

c) Balanced Redox in Acidic Conditions

d) Balanced Redox in Basic Conditions