

Redox Practice Problems

Indicate the oxidation states of each of the elements in the following chemical species:

- 1) NaOH
- 2) HBr
- 3) VF₅
- 4) Na₂SO₄
- 5) NO₂⁻¹
- 6) SiOF₂

Determine which of the following reactions are redox reactions. For those that are, identify the element which has been oxidized and the one that has been reduced:

- 7) $2 \text{NaOH} + \text{CaCl}_2 \rightarrow 2 \text{NaCl} + \text{Ca(OH)}_2$
- 8) $3 \text{Li} + \text{FeCl}_3 \rightarrow 3 \text{LiCl} + \text{Fe}$
- 9) $\text{CCl}_4 + 2 \text{Br}_2 \rightarrow \text{CBr}_4 + 2 \text{I}_2$
- 10) $\text{HNO}_3 + \text{NaHCO}_3 \rightarrow \text{H}_2\text{O} + \text{CO}_2 + \text{NaNO}_3$