Oxidation - Reduction

1. Indicate the oxidation number of each atom in the following:

K₂Cr₂O₇ K ____ O ____

Ca₃(PO₄)₂ Ca ____ P ___ O ____

N₂O₄ N ____ O ____

S₂O₃²⁻ S ____ O ___

 MnO_4^{2-} Mn _____ O _____

H₂PtCl₆ H _____ Pt ____ Cl____

2. Consider the following reaction:

 $Zn(s) + HCl(aq) \rightarrow ZnCl_2(aq) + H_2(q)$

- a) What has been oxidized?
- b) What has been reduced?
- c) Which is the oxidizing agent?
- d) Which is the reducing agent?

3. Which is the reducing agent in the following reaction?

 $2 S_2 O_3^{2-} (aq) + I_3^{-} (aq) \rightarrow S_4 O_6^{2-} (aq) + 3 I^{-} (aq)$