

Oxidation-Reduction Worksheet

1. Determine the oxidation number of each atom in the following substances:

- a. NH_3 N +3 H +1
- b. K_2CO_3 K +1 C +4 O -2
- c. HCl H +1 Cl -1
- d. SO_2 S +4 O -2

2. For the following balanced redox reaction answer the following questions:



- a. What is the oxidation state of oxygen in H_2O_2 ? -1
- b. What is the element that is oxidized? Fe
- c. What is the element that is reduced? O
- d. What is the oxidizing agent? H_2O_2
- e. What is the reducing agent? Fe^{3+}
- f. How many electrons are transferred in the reaction as it is balanced? 2e

3. For the following balanced redox reaction answer the following questions:



- a. What is the oxidation state of O in $\text{C}_2\text{O}_4^{2-}$? -2
- b. What is the oxidation state of C in $\text{C}_2\text{O}_4^{2-}$? +3
- c. What is the element that is oxidized? C
- d. What is the element that is reduced? Fe
- e. What is the oxidizing agent? $\text{C}_2\text{O}_4^{2-}$
- f. What is the reducing agent? Fe^{3+}
- g. How many electrons are transferred in the reaction as it is balanced? 2e