Participation Assignment
CHEM 1090-General Chemistry I

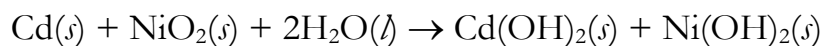**Name:** **#12**

Section: 32, TR **Due Date: Tuesday 3/3/2020**

1a. Assign oxidation numbers to each atom in the following reaction:

$$Cd(s) + NiO_2(s) + 2H_2O(l) \rightarrow Cd(OH)_2(s) + Ni(OH)_2(s)$$

b. What is oxidized? c. What is reduced?

d. What is the oxidizing agent? e. What is the reducing agent?

2a. Assign oxidation numbers to each atom in the following reaction:

$$Cl^-(aq) + OCl^-(aq) + 2H^+(aq) \rightarrow Cl_2(g) + H_2O(l)$$

b. What is oxidized? c. What is reduced?

d. What is the oxidizing agent? e. What is the reducing agent?

3. Define each of the following:
   a. energy

   b. heat

   c. exothermic

   d. endothermic

4. Calculate the amount of heat in kilojoules transferred when a can of soda is cooled from 25.0 °C to 3.0 °C. The mass of a can of soda is about 369 g and assume we are only concerned with the contents and not the container.

Assume the specific heat of the soda is $4.18\dfrac{J}{g\,°C}$.