Preclass Assignment
CHEM 1090-General Chemistry I

Name: **#8**

**Section: 32, TR**   **Due Date: Thursday 11/15/2018**

1. 57.152 g of solid gold at 75.32 °C is plunged into a container of cold water. Once the water and the gold have attained the same temperature, it's determined that 87.6 J of heat have been transferred from the gold sample to the water. What is the new temperature of the solid gold? You will need to look up the value for the specific heat of gold.

2. Write chemical equations for the production of 1 mol of each of the following substances from their corresponding elements. Follow the examples and don't forget expected physical states for each of the elements and watch for diatomics.

Example #1: $NaCl(s)$

$$Na(s) \ + \ \tfrac{1}{2} \, Cl_2(g) \ \rightarrow \ NaCl(s)$$
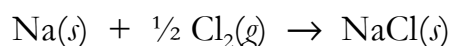
Example #2: $CH_4(g)$

$$C(s) \ + \ 2 \, H_2(g) \ \rightarrow \ CH_4(g)$$
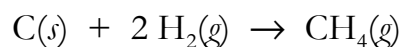
a. $CO_2(g)$

b. $N_2O_5(g)$

c. $CaCl_2(s)$

d. $CaSO_4(s)$

e. $C_2H_2(g)$