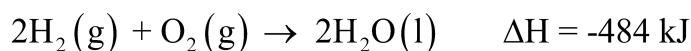# Chapter 5 Practice Quiz B

Name _____

2pts 1. Under what conditions (if any) is the enthalpy change (ΔH) and the heat flow (q) the same?

2pts 2. Write an equation that represents the standard heat of formation ($\Delta H°_f$) of $NCl_3(g)$.

2pts 3. How much heat would be released when 10.0 g of hydrogen are burned according to the following equation: (Ans: -1.20×10^3 kJ)

$$2H_2(g) + O_2(g) \rightarrow 2H_2O(l) \qquad \Delta H = \text{-484 kJ}$$

2pts 4. When 33.0 mL of 1.20 M HCl is added to 32.0 mL of excess NaOH the temperature of the solution rises from 25.0 to 32.8°C. Assume that the density (1.00g/mL) and the specific heat (4.184J/gx°C) of the solution are the same as those of pure water, calculate the ΔH for this reaction in kJ/mole. (Ans: -54 kJ/mole)

$$HCl(aq) + NaOH(aq) \rightarrow NaCl + H_2O(l)$$
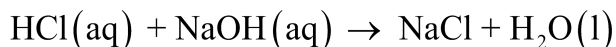
2pts 5. Which of the following has a standard heat of formation of zero at 25 °C at 1.0 atm?

   a) O(g)   b) HCl(g)   c) Fe(s)   d) H_2O(l)   e) CH_3OH(l)