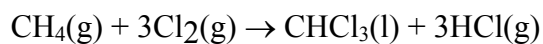


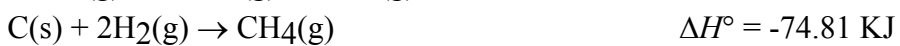
Name \_\_\_\_\_ Period \_\_\_\_\_

**AP Chemistry Test**  
**Chapter 6 Thermochemistry**

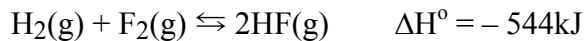
All questions are worth 25 points each.

1) Find  $\Delta H^\circ$  for making chloroform ( $\text{CHCl}_3$ ) from methane

using the following equations:



?2) For the reaction:

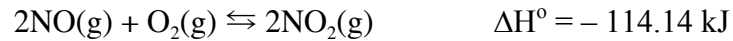


The Bond Energies are:

H-H 432 KJ/mol    F-F 154 KJ/mol

What is the bond energy of a HF Bond?

?3) For the reaction:



If the heat of formation for  $\text{NO}_2(\text{g})$  is 33.2 kJ and the for  $\text{O}_2(\text{g})$  is zero what is the heat of formation for  $\text{NO}(\text{g})$ ?

4) You have a calorimeter whose constant is  $50 \text{ J}/^\circ\text{C}$ . It holds some water at  $25.0^\circ\text{C}$ . To this you add 50.0 g of copper that is at  $100.0^\circ\text{C}$ . The resulting mixture ends at a final temperature of  $26.29^\circ\text{C}$ . What is the heat capacity of the copper?