**Homework #8 Chemistry 1114 section 2 (Fong) due Friday 23 March 2018 15pts (in class) Show your work !!**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1 pt**

**1) 2.0 grams of C are burned to make 7.333 g COx. What is the empiric formula for COx ? (at. mass C=12 g/mol; at mass O=16 g/mol)**

 **\_\_\_\_\_\_\_\_\_ COx formula**

**2) CaHb is burned in O2 to make 0.1111 g CO2 and 0.02273 g H2O.**

 **What is the empiric formula for CaHb ? (mol. mass CO2 =44 g/mol;**

 **mol. mass H2O=18 g/mol)**

 **\_\_\_\_\_\_\_\_\_ CaHb formula**

**3) Balance me:**

 **\_\_C8H18 + \_\_\_O2🡪 \_\_\_CO2 + \_\_\_H2O**

**4) A 4 gram sample of an iron oxide is heated in vacuum to produce 3.109 g of pure**

 **iron (Fe). What is the original oxide’s formula ? (at. wt of Fe=55.845 g/mol; at.**

 **wt of O=16.0 g/mol)**

 **\_\_\_\_\_\_ Fe oxide formula**

**Given the balanced equation: C3H8 + 5O2 🡪 3CO2 + 4H2O**

**5a) How many grams of O2 are burned if 0.0375 mol of CO2 are produced?**

 **\_\_\_\_\_ g O2**

**5b) How many grams of C3H8 are burned to produce 9 g CO2 ?**

 **\_\_\_\_\_\_ g C3H8**

**5c) How many molecules of CO2 are produced when we burn 2.444 g C3H8 ?**

 **\_\_\_\_\_\_\_\_\_\_\_ molecules CO2**