**Homework #9: Chemistry 1013 Spring 2011**

**Due Monday 25 April in class 10 pts**

Your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**9.1) Compute the desired quantities on the right using the quantities on the left. (Round atomic masses to the nearest whole # to get MW. Assume 1 mole = 6.022\*1023 )**

**360 g H2O = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mole H2O**

**1.2318\*1023 CO2 molecules = \_\_\_\_\_\_\_\_g CO2**

**0.08 moles CaCO3 =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_g CaCO3**

**196 grams N2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_moles N2**

**9.963\*10-24 moles O2 =\_\_\_\_\_\_\_\_\_\_\_\_ molecules O2**

**2.324\*10-22 g CO =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ molecules CO**

**9.2) % Composition (2 pts each/4 pts total)**

1. **Given a compound containing C and H whose weight percents are: 75 wt % C; 25 wt% H determine the compound’s empiric formula (show work below)**
2. **Given a compound containing C,H and O whose weight percents are: 52.17 wt % C;**

**34.78 % O and 13.05% H, determine the compound’s empiric formula (show work below)**