**Mole HomeWork 4**

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

**Do these problems and turn your completed work to class**

**Friday 2 October. You can put your work on a separate piece of paper or copy this off and do the work in the spaces provided. SHOW WORK or NO CREDIT!!!!**

**(2 pts each/4 pts total)**

**1) Compound Dick is composed of 0.5333 g C, 0.1111 g H**

 **and 0.35555 g O. What is Dick’s empiric formula ?**

**element mass atomic wt/mol mol =n n/nmin**

**C 0.5333 g 12 0.5333/12 =0.04444 0.04444/0.0222=2**

**H 0.1111 g 1 0.1111/1=0.1111 0.1111/0.0222=5**

**O 0.3555 g 16 0.3555/16 =0.0222 0.0222/0.0222=1**

 **\_C2H5O\_\_\_\_\_\_Dick’s empiric formula**

**2) Compound Jane is composed of 5.4545 g C, 1.3636 g H and**

 **3.1818 g N. Jane’s molecular weight is 220 g/mol. What is**

 **Jane’s molecular formula?**

**element mass atomic wt/mol mol =n n/nmin**

**C 5.4545 g 12 5.4545/12 =0.0.4545 0.4545/0.2272=2**

**H 1.3636 g 1 1.3636/1=1.3636 1.3636/0.2272=6**

**N 3.1818 g 14 3.1818/14 =0.2272 0.2272/0.2272=1**

**Empiric formula C2H6N MW=44 g/mol**

**Molecular weight actual is 220 g/mol**

**220/44=5**

 **\_C10H30N5\_\_\_\_\_Jane’s molecular formula**