**Chem 1013: mini-quiz #20: combustion analysis**

Your name: \_\_\_\_\_\_\_\_\_\_**answers\_**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_/4

A sample composed of P and H , PxHy, is burned in O2 to form 7.1 g of P4O10 and 2.70 g H2O. What is the empiric formula for PxHy

The molecular weight of P4O10=284 g/mol and the molecular weight of H2O=18 g/mol.

**Mol P=4\*Mol P4O10 = 4\*7.1/284=0.10 mol**

**Mol H= 2\*mol H2O= 2\*2.7/18=0.30 mol**

**P0.1H0.30🡪 PH3**

 \_\_\_\_**PH3**\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PxHy empiric formula