**Mini-quiz #19 Chemistry 1114 Wed 24 October 2012**

Your name\_\_\_\_**answers\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Butane burns according to the stoichiometrically balanced equation below:

**2C4H10 + 13O2 🡪 8CO2 + 10H2O**

1. 0.2 moles of C4H10 are burned to completion to form water and CO2.

How many moles of water, H2O form as a result ?

**m(H2O) = 10 => ~~0.2~~\*m(H2O) = 10\*0.2 = 1 mol H2O**

**0.2 mol C4H1O 2 ~~0.2~~ 2**

**\_\_1**\_\_\_\_ mol H2O

1. How many grams of H2O are formed ? (MW H2O=18 g/mol)

**1 mol H2O weighs 18 grams**

\_\_**18**\_\_\_\_g H2O

1. How many moles of O2 were consumed to burn the 0.2 moles of C4H10.

**m(O2) = 13**

**0.2 mol C4H10 2**

\_\_\_**1.3**\_\_\_\_ mol O2

**~~0.2~~\*m(O2) = 13\*0.2 = 1.3**

**~~0.2~~ 2**