**Mini-quiz #20 Chemistry 1114 October 2012**

Your name\_\_\_\_\_\_\_answers\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Propane (C3H8) burns to make CO according to the stoichiometrically balanced equation below:**

**2C3H8 + 7O2 🡪 6CO + 8H2O**

**g/mol 44 32 28 18**

1. **How many grams of CO are formed by burning 1.0476 g C3H8 ?**

Mole C3H8 = 1.0476/44= 0.0238

Mol CO/mol C3H8 = 6/2=x/0.0238

X= 3\*0.0238=0.07142 mol CO => grams CO = 28\*0.07142=2

**\_\_\_2\_\_\_\_\_g CO**

1. **How many moles of H2O can be made by burning 22 grams of C3H8 and 64 grams O2 together ?**

Mol C3H8=22/44=0.5 Mole O2 =64/32=2

Mol H2O/molC3H8=8/2=x/0.5 Mole H2O/mol O2 = 8/7=x/2

x= 2 mol H2O x=2.285 mol H2O

smaller => limiting

**\_\_2\_\_\_\_ mol H2O**