**Mini-quiz #21 Chemistry 1114 5 Nov 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**

**Given: 2.095 g C3H8 16.0 g O2**

**How many grams of CO can form theoretically?**

**Mol C3H8 = 2.095/44 =0.0475 => mol CO/mol C3H8= 6/2= x/0.0475=> x=3\*0.0475=0.143**

**Mol O2= 16/32=0.5 => mol CO/mol O2 = 6/7=x/0.5=>x=6\*0.5/7=0.428**

**C3H8 limits so 0.143 mol CO\*28 g/mol CO=4.0 g**

**\_\_\_4\_\_\_\_\_\_g CO**