**Mini-quiz 23 Chem 1013 Monday 29 April 2013 4 pts**

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

Gasoline (octane=C8H14) burns with O2 according to the balanced equation below:

**2C8H18 + 25 O2 🡪 16CO2 + 18H2O**

If 3.238 grams C8H18 are burned, how many grams of CO2 are created? (The molecular weight of C8H14 is 114 grams/mole. The molecular weight of CO2 is 44 grams/mole.) Show work.

3.238 g C8H18 =0.0284 mol C3H8 mol CO2 = 16 = x

114 g C8H18/mol mol C3H8 2 0.0284

 16\*0.0284 = x=0.2272 mol CO2 2 \_\_\_10\_\_\_\_ g CO2

 **.2272 mol \*44 g/mol ~10 g**