PERCENT YIELD PROBLEM

(Periodic Table will be provided in this worksheet to calculate for molar mass. Answering should be finished after 15-20 minutes)

Problem:

If, in the reaction below 32 grams of C_2H_6 produces 44 grams of CO_2, what is the percent (%) yield?

$$2C_2H_6 + 7O_2 \rightarrow 4CO_2 + 6H_2O$$

A. Convert grams to moles

$$\text{g } (\frac{mol\ C_2H_6}{g\ C_2H_6}) = \quad \text{mol } C_2H_6$$

B. Get the mole ratio of C_2H_6 and CO_2

$$\text{mol } C_2H_6\ (\frac{mol\ CO_2}{mol\ C_2H_6}) = \quad \text{mol } CO_2$$

C. Convert the mole ratio answer to grams

$$\text{mol } CO_2\ (\frac{g\ CO_2}{mol\ CO_2}) = \quad \text{g } CO_2$$

D. Solve for the percent yield:

$$(\frac{actual\ yield}{theoretical\ yield})\ \text{x100}$$

$$= (\frac{g\ CO_2}{g\ CO_2})\ \text{x100}$$

$$= (\quad)\ \text{x100}$$

$$= \quad \%$$

LIVEWORKSHEETS