

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?



A. Convert grams to moles

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

B. Get the mole ratio of C_2H_6 and CO_2

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

C. Convert the mole ratio answer to grams

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

D. Solve for the percent yield:

$$\left(\frac{\text{actual yield}}{\text{theoretical yield}} \right) \times 100$$

$$= \left(\frac{g \text{ } CO_2}{g \text{ } CO_2} \right) \times 100$$

$$= (\quad) \times 100$$

$$= \quad \%$$