

Homework
Due 3/18

Mass and Mole – Chapter 3

If you combust 5.00 g of propane (C_3H_8), how much H_2O (in grams) will you produce?

HINTS:

1. Write and balance the equation for the combustion of propane.



2. Determine the moles of propane in 5.00 g of propane.

$$(5.00g) \left(\frac{1 \text{ mol}}{44.097g} \right) = 0.113 \text{ mol propane}$$

3. Determine the number of moles of H_2O you will produce from the moles of propane determined in #2.

$$(0.113 \text{ mol propane}) \left(\frac{4 \text{ mol } H_2O}{1 \text{ mol propane}} \right) = 0.453 \text{ mol } H_2O$$

4. Determine the grams of H_2O from the moles of H_2O you determined in 3.

$$(0.453 \text{ mol } H_2O) \left(\frac{18.016g}{1 \text{ mol}} \right) = 8.16g$$