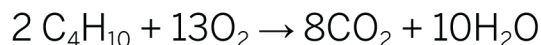


STOICHIOMETRY PROBLEMS

1. The combustion of a sample of butane, C_4H_{10} (lighter fluid), produced 2.46 grams of water.



(a) How many moles of water formed?

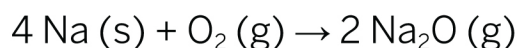
(b) How many moles of butane burned?

(c) How many grams of butane burned?

(d) How much oxygen was used up in moles?

(e) How much oxygen was used up in grams?

2. Sodium metal burns in air according to the balanced reaction below.



(a) How many moles of oxygen are needed to react with 9.5 g of sodium completely?

(b) How many grams of sodium are needed to produce 12.5 g of sodium oxide?

3. In the combustion of 54.5 g of butane (C_4H_{10}), how many grams of CO_2 are produced? Write and balance the equation before solving.