

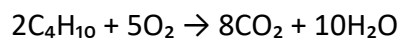
MY FAVORITE MISTAKE

Identify where the mistake is in the steps and answer the questions in the table that follow.

Problem: How many moles of O_2 do you need to burn 3 moles of C_4H_{10} ?

Given equation: $__ C_4H_{10} + __ 13O_2 \rightarrow __ CO_2 + __ H_2O$

Step 1: Balance the equation:



Step 2: Mole-to-mole ratio:

2 moles C_4H_{10} require 26 moles O_2

Step 3: Using the given information solve the problem:

$$\frac{3 \text{ moles } C_4H_{10}}{2 \text{ moles } C_4H_{10}} \times \frac{5 \text{ moles } O_2}{13 \text{ moles } O_2} = 39 \text{ moles } O_2$$

Q1. What are two things that are done well?

Q2. Where is the mistake?

Q3. What should be done differently?

Q4. What is the correct answer?