Read the exam style question carefully, then fill in each section below.

Question:

Propane burns to produce carbon dioxide and water in a combustion reaction.

This reaction can be represented with the equation:

$$C_3H_8\ (g) + 5\ O_2\ (g) \rightarrow 3\ CO_2\ (g) + 4\ H_2O\ (l)$$

2.4 dm^3 of carbon dioxide is produced when a sample volume of propane is burned completely in 6.5 dm^3 of oxygen at rtp.

Calculate the volume of gas remaining in the reaction chamber at the end of the reaction. **(5)**

Section 1: At first glance

1. What **command words** are used in this question? Circle them clearly.

2. **Underline the key information** in the question above.

2. **How many marks** is this question worth?

Section 2: Thinking ahead

Read the question again.

What do you need to know in order to answer this question really well?

Can you split the question into two or more parts?
Are there any labelled diagrams that might help you to show your answer?

What are the key words that you should include in your answer?

Section 4: Space to plan

Use this space to plan your answer.

Section 4: Answer the question

Section 5: Mark Scheme

Point	Mark
2.4 dm^3 CO_2 x (5/3)	1 (calculation)
4 dm^3	1 (volume of oxygen reacted)
6.5 – 4 = 2.5 dm^3	1 (volume of unreacted oxygen)
2.5 + 2.4	1 (calculation including gas product)
4.9 dm^3	1 (answer)