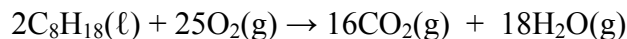


<b>CHAPTER 4</b>	<b>Molar Volumes and the Law of Combining Volumes Problems</b>	<b>BLM 4.1.6</b>
<b>ASSESSMENT</b>		

1. The combustion of gasoline in an automobile engine is represented in the equation below:



- (a) If 4.0 L of oxygen are consumed, what volume of each of the product gases will result?
- (b) In 1998, each Canadian produced an average  $1.5 \times 10^4$  tonnes of carbon dioxide emissions per year (representing  $8.5 \times 10^3$  kL). Of this, 30% was a result of transportation usage. What volume of oxygen is consumed as a result?
2. Xenon and fluorine gases react to produce solid crystals of xenon tetrafluoride according to the following equation:
- $$\text{Xe}(\text{g}) + 2\text{F}_2(\text{g}) \rightarrow \text{XeF}_4(\text{s})$$
- What volume of fluorine is required to consume 85 mL of xenon?
3. How many moles are present in a gas sample if it occupies 3.7 L at SATP?

