Worksheet 1

Name Class Date

**1** Complete the section below about the complete combustion of methane.

Fill in the gaps using the correct answers.

Methane is obtained from the refinery gases \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It is defined as a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because energy is released when it is burned. Burning is an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reaction which is also known as combustion. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ combustion is when a substance burns in plenty of air or oxygen.

The products formed during the complete combustion of methane are carbon dioxide and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The word equation is:

methane  oxygen → carbon dioxide  water

Energy is also transferred by heat and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the surroundings during the combustion of methane.

**2** Balance the following equations showing complete combustion.  
Numbers do not necessarily need to go in each space.

**a** \_\_\_\_\_C2H4  \_\_\_\_\_O2 → \_\_\_\_\_CO2  \_\_\_\_\_H2O

**b** \_\_\_\_\_C3H8  \_\_\_\_\_O2 → \_\_\_\_\_CO2  \_\_\_\_\_H2O

**c** \_\_\_\_\_C4H10  \_\_\_\_\_O2 → \_\_\_\_\_CO2  \_\_\_\_\_H2O

**d** \_\_\_\_\_C5H12  \_\_\_\_\_O2 → \_\_\_\_\_CO2  \_\_\_\_\_H2O