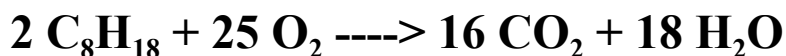


Name: _____ Date: _____ Period: _____

Worksheet 11.3 - Ideal Gas Law and Stoichiometry



The above reaction takes place between gasoline (octane) and oxygen that occurs inside automobile engines.

1) How many liters of gasoline are needed to produce 29.5 liters of carbon dioxide?

2) If 4.00 moles of gasoline are burned, what volume of oxygen is needed if the pressure is 0.953 atm, and the temperature is 35.0°C?

3) How many grams of water would be produced if 20.0 liters of oxygen were burned at a temperature of -10.0°C and a pressure of 1.3 atm?

4) If you burned one gallon of gas (C₈H₁₈) (approximately 4000. grams), how many liters of carbon dioxide would be produced at a temperature of 21.0°C and a pressure of 1.00 atm?

5) How many liters of oxygen would be needed to produced 45.0 liters of carbon dioxide if the temperature and pressure for both are 0.00°C and 5.02 atm?