

Name: \_\_\_\_\_ Per: \_\_\_\_\_ Date: \_\_\_\_\_

In Class Exam Review Problems: **SHOW ALL YOUR WORK FOR CREDIT**  
**R = 0.0821 L atm/mol K or R = 62.4 L mmHg/mol K 1 atm=101 kPa**

1. If you fill a cylinder with a volume of 15.0 L with O<sub>2</sub> with a pressure of 2.0 atm at 35°C, then how many moles of O<sub>2</sub> does the cylinder contain?
2. In a can there lies a gas with a pressure of 92 kPa at 37°C. The can is thrown into a fire. What is the new pressure at 918 °C?
3. The volume of a gas-filled balloon is 35.0 L at 45 °C and 160 kPa pressure. What volume will the balloon have at STP?
4. The volume of a gas filled box is 45.0 L at 50°C and 1.5 atm of pressure. What volume will the box have at STP?
5. You have 2 gases. You have a 5800 ml quantity of H<sub>2</sub> at 5°C and 3.840 torr which is combined with 15.0L of O<sub>2</sub> at 760K and 930 torr. These two gases are put into a 15 L container at a pressure of 9.50 atm. What is the new temperature of the gases when combined?
6. Given a 1.25 L quantity of O<sub>2</sub> at 28 °C and 2.3 atm, which was combined with 2.0 L of N<sub>2</sub> at 31° and 2.7 atm. it is placed into a container of 4.0L at 29°C. What is the new pressure?
7. A 5.0L container holds 3.7 moles of O<sub>2</sub> at 27°C. What is the pressure in atm?
8. A gas with the volume of 10.0 L at a pressure of 633 mmHg and a temperature of 27°C is transferred into a container with the pressure decreasing to 250 mmHg and having a temperature of 30°C. What is the new volume?
9. A gas with a volume of 25.0mL at 2.5 atm at 32°C is heated to a temperature of 350 K at 2.5 atm. What is the new volume?
10. Mrs. B collected 3.0 L of N<sub>2</sub> gas. The temperature of the gas is 25°C and with pressure of 231 mmHg. What is the volume of the gas when the temperature rises 5°C and the new pressure is 300 mmHg.