Gas Laws: Part 2

1. Helium gas has a pressure of 8.25 atm in a 4.65 L vessel. If the volume is decreased to 2.65 L, what is the pressure? The temperature is held constant.

2. Neon gas exerts a pressure of 125 kPa at 395 K. What is the pressure, in atm, if the temperature is increased to 500 K?

3. A sample of chlorine gas occupies a volume of 785 mL at 1.00 atm at a temperature of -9.00 °C. What volume will the gas occupy if the pressure is tripled and the temperature is increased to 167 °C?

4. A 0.595 L sample of krypton gas is held under STP. What volume does the gas occupy if the pressure is tripled and the temperature is doubled?

5. A 45.0 L sample of N_2 gas is under a pressure of 8.6 atm at a temperature of 89.2 °C. If the volume is decreased to 20.0 L, the temperature is decreased to 25.5 °C, what is the new pressure?

6. How many grams of CO_2 are contained in a 44.8 L vessel at STP?