Name _____

Gas Laws

1) 1) A gas at constant temperature is at a pressure of 715mmHg and occupies 10.7L of space. What would the final pressure be if the volume was increased to 15.5L?

2) At constant volume, a sample of gas at 285kPa of pressure and 206K is heated to 500.K, what is the final pressure of the gas?

3) A 2.000L sample of a gas at STP is heated to 1000K and compressed to a volume of 0.500L. What is the final pressure on the gas?

4) A 550.mL gas is kept under constant pressure and warmed from 273K to 373K. What is its final volume?

5) How many moles of a gas do you have if the gas is at 100.K and is under 20.0 atm of pressure in a 1.00L flask?

6) If you have 10.0 moles of a gas under 20.0 atm of pressure and at a temperature of 200.K, what volume would it occupy?

7) At constant volume, a gas goes from 2.00 atm of pressure at 0.00 ^{o}C to 8.00 atm of pressure, what is the final temperature?

8) A 4.00L sample of a gas at 200.kPa of pressure and at a temperature of 300.K is put under 325.kPa of pressure and has its volume decrease to 3.00L. What is the final temperature?

9) A 5.00L gas is at STP, and it experiences an increase in pressure to 3.00 atm. If the temperature does not change, what is the final volume?

10) A 300.cm^3 volume of gas at a temperature of 400.K is kept under constant pressure, what would its final temperature be if its volume in increased to 500.cm^3?

11) A gas is compressed into a 2.00L flask at STP. What was its initial volume if its original temperature was 200. ^{o}C and its original pressure was 740.mmHg?

12) How many moles of a gas do you have if it is under 800.mmHg of pressure in a 500.mL flask at a temperature of 32 ^{o}F?

13) The volume of a gas changes from 2.00L to 0.40L. Its initial pressure was 2.00 atm. What is the final pressure of the gas in kPa under constant temperature?

14) The temperature of a gas is changed for -12 ^{o}C to 45 ^{o}C. If the volume is held constant, what is the change in pressure if the original pressure was 1.5 atm?