**Topics: Gas Laws Quiz Review Sheet**

This is a lot like your quiz tomorrow. Please make sure you review these questions:

1) If I have a soda bottle with a volume of 1.00 L at a pressure of 1.00 atm, what will the new pressure inside the bottle be if the bottle is squished to a new volume of 0.75 liters?

2) When I put a can of hairspray into the fire, the can explodes violently because the pressure inside becomes too high to be held by the metal can. If the can has a volume of 750 mL at a temperature of 298 K, what will the volume of the gas be immediately after the can explodes at a temperature of 700 K?

3) I have 14 moles of air inside of my office. If the volume of my office is 36,000 L and the temperature inside my office is 20 degrees Celsius, what is the pressure of the air inside my office? R = 0.08206 Latm/mol K. Could I effectively work in my office under these conditions?

4) How many moles of air would need to be in my office for the pressure to be exactly 1.00 atm? Use the information from problem 3 above.

5) One term that is commonly used when talking about gases is “STP”, which stands for “standard temperature and pressure.” The conditions of STP are 273 K and 1.013 atm. Given this information, what is the volume of one mole of gas at STP?