**Topics Final Exam Review #2**

These questions are a lot like those on the final, so make sure you know how to do these!

R = 0.08206 Latm/molK

1) If I have 45 moles of a gas at a pressure of 1 atm and a temperature of 300 K, what will the volume of this gas be?

2) If I have 4.0 liters of a gas at a temperature of 298 K and I raise the temperature to 500 K, what will the new volume of the gas be?

3) I have a 2.0 L bottle that contains 1.25 moles of methane gas at a temperature of 298 K. Given this information, what is the pressure inside of this bottle?

4) If a gas is in a 4.0 L tank at a pressure of 1.1 atm, what will the pressure inside the tank be if I decrease the volume to 1.8 L?

5) What is a mole?