**Gas Laws Practice**

*Handy tip: Always use Kelvin when computing temperature. K = oC + 273*

1. If I have a balloon with a volume of 5.0 liters and a temperature of 15 degrees Celsius, what will the volume of the balloon be if it heats to a temperature of 45 degrees in the sun?
2. If I have 4.5 moles of a gas at room temperature and at a pressure of 1.0 atm, what is the volume of the container in which it is located? (R = 0.08206 Latm/molK)
3. My son built a small model of the sun that has a temperature of 53 degrees Celsius, a volume of 2.0 liters, and a pressure of 1.0 atm. If his model sun goes supernova, the gases will expand such that they have a temperature of 1.0 x 109 Kelvin and a pressure of 1.1 x 10-22 atm, what will the volume of the resulting nebula be?
4. How many moles of air can a normal person hold in his lungs? The volume of an average person’s lungs is 6.0 L, the temperature of an average person is 37 degrees Celsius, and the pressure inside the lungs is 1.03 atm, how many moles of air can these lungs hold?