**General Quiz: Gas Laws**

Note: R = 0.08206 Latm/molK

1) I’ve got an empty 2 L bottle of soda in my house at a temperature of 22 degrees Celsius. If the heating goes out in my house and the temperature rises to 35 degrees Celsius, what will the volume of the bottle be? (5 pt)

2) A 355 mL can of soda at 20 degrees Celsius has approximately 0.05 moles of carbon dioxide dissolved in it. If the liquid were removed leaving only the CO2 in the can, what would the pressure inside the can? (5 pt)

3) Let’s say that I have another 355 mL can of soda at 20 degrees Celsius at a pressure of 0.996 atm. If you increase the temperature to 50 degrees Celsius and leave the volume of the can the same, what will the new pressure inside the can be? (5 pt)

4) A basketball has a volume of 7.1 liters. If I want the basketball to have a pressure of 1.54 atm at a temperature of 25 degrees Celsius, how many grams of argon gas (Ar) would I need to fill it with? (5 pt)