# Answer on Question #63969 - Chemistry - General Chemistry

**Question:** Calculate the volume of $N_2$ that results when 0.144 L of the gas is heated from 325.0 K to 353.0 K at 1.00 atm.

**Solution**

According to the gas laws, the volume of the same amount of gas at constant pressure is directly proportional to the temperature of the gas: $\frac{V_1}{V_2} = \frac{T_1}{T_2}$, so $V_2 = \frac{V_1 * T_2}{T_1}$

So, the volume of $N_2$ at 353 K is: $V(N_2) = \frac{0.144 * 353}{325} = 0.1564\ L$

**Answer:** the volume of $N_2$ at 353 K is 0.1564 L.