Find the Number of Moles of Air in Your Classroom!

Determine the number of moles of air in your classroom by using a meter stick to calculate the volume of the classroom (along with the formula for volume) and the conversion factor of 1mole=22.4 liters of gas. Assume standard temperature and pressure (273 K and 1 atmosphere or 760mm Torr).

Once you have completed this volume/mole calculation, determine the number of grams of air that are in your classroom (the average molar mass of air is approximately 29 g/mol). Finally, calculate the number of molecules of air in the classroom. Show all work on a separate piece of paper.

Length, width and height of classroom _____,_____,_____

Volume of classroom=_____

Number of moles of air in the classroom_____

Number of grams of air in the classroom_____

Number of molecules of air in the classroom_____.