Ideal Gas Law Practice

Round each value to the hundreths decimal place. Every answer should have 2 decimal places.

Complete the following problems on paper. Show all work for credit!!!

1. Given the following sets of values, calculate the unknown quantity.

P = 1.01 atm V=? n = 0.00831 mol T = 25°C

2. Given the following sets of values, calculate the unknown quantity.

P = 200kPa V= 0.602 L n = ? (g of CO_2) T = 311 K

3. At what temperature would 2.10 moles of N_2 gas have a pressure of 1.25 atm in a 25.0 L tank?

4. When filling a weather balloon with gas you have to consider that the gas will expand greatly as it rises and the pressure decreases. Let's say you put about 10.0 moles of He gas into a balloon that can inflate to hold 5000.0L. Currently, the balloon is not full because of the high pressure on the ground. What is the pressure when the balloon rises to a point where the temperature is -10.0°C and the balloon has completely filled with the gas?

5. What volume is occupied by 5.03 g of O_2 at 28°C and a pressure of 0.998atm?

6. Calculate the pressure in a 212 Liter tank containing 2303g of argon gas at 25°C.

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