Gas Laws – Practice

TEKS 9A

Using Dalton’s Law of Partial Pressure, solve the following problems.

1. A 10-L steel canister holds a mixture of hydrogen gas (H2) and water vapor (H2O). The pressure exerted by hydrogen gas in a closed container is 2.5 atm. If the total pressure is 4.7 atm, what is the pressure exerted by the water vapor?
2. What is the total pressure in a 5.0-L container containing chlorine gas (Cl2) at 0.29 atm, helium (He) at 0.74 atm and hydrogen gas (H­2) at 0.65 atm?
3. A mixture of 0.20 mol H2O, 0.40 Br2 and 0.30 mol of H2 in a 10.0L container. What is the partial pressure exerted by each gas in the container?
4. A balloon contains 0.1 moles of oxygen and 0.4 moles of nitrogen. If the balloon is at standard temperature and pressure, what is the partial pressure of the nitrogen?