

Practice problem for gases for quiz_CHE101

Problem 1. A 1-State Problem

This style of problem can be identified by containing three of the four variables for the Ideal Gas Law.

$PV = nRT$, three of them will be given but you have to find one. Look at the units of R you may need to convert it to an expected unit.

Problem 2. A 2-State Problem

These problems are identified by noting that one of the variables has two values supplied – one for a “before” state and one for an “After” state. Start these by using two versions of the $PV = nRT$ equation, one for each state, that have been ratioed. R cancels out for this type of problem as do some other variables.

$$\frac{P_2 V_2}{P_1 V_1} = \frac{n_2 T_2}{n_1 T_1}$$

Problem 3. A Mass-Formula Weight Problem

This version of the Gas Law problems is evident when “gram” or “formula weight” appear in the wording. It simply replaces the “n” in the equation with “m/f. w.”

Problem 4. Partial pressure problem

If the moisture content of air is at Ar is .90 %, what partial pressure does Ar exert on a typical 0.895 atm day in Missoula?

Problem 5. Kinetic molecular theory problems

e.g., which statement of the kinetic molecular theory is INCORRECT?