Answer on Question 83511 in General Chemistry

.m (gas) =3.85 g

.t=51^{o} C=324 K

. p =1 atm

V=2.45 L

.ρ (gas) =?

Mr=?

Find the density of gas

.ρ= $\frac{m}{V}$= $\frac{3.85}{2.45}$ =1.57 $^{g}/_{L}$

Find the molar mass of the gas using the Clayperon Mendeleev equation

.p×V=$\frac{m}{Mr}RT$

From which Mr=$\frac{m\times R\times T}{p\times V}$=$\frac{3.85\times 0.0821\times 324}{1\times 2.45}$ =41.8

Answer provided by www.AssignmentExpert.com