10.36 $3.33\times10^{-3}$ mole, 325 ml, 750 torr
n V P

$PV = nRT$

$\left(\frac{750}{760}\right)(0.325) = (3.33\times10^{-3})(0.08206)T$

Dec 8-7:42 AM

10.38 $O_3$ Molecules 0.003 atm, 1 l, 250 K

$PV = nRT$

$(0.003)(1) = n(0.08206)(250)$

$n = \left|1.462\times10^{-4}\ \text{mole } O_3\right| \left|6.02\times10^{23}\ \text{molecules } O_3\right| \over \left|1\ \text{mole } O_3\right|$

$8.8\times10^{19}$ molecules $O_3$

Dec 8-7:52 AM

$4NH_{3(g)} + 5O_{2(g)} \rightarrow 4NO_{(g)} + 6H_2O_{(g)}$

5 atm
850°C
? ℓ

1 mole

$\frac{1\ mole\ O_2}{5\ mole\ O_2} \left| \frac{4\ mole\ NH_3}{} \right. = 0.8\ mole\ NH_3$

$PV = nRT$

$V = (0.8)(0.08206)(1123)$

$V = 14.8\ \ell$

Dec 8-7:59 AM

Mixture of Gases

AIR
$CO_2 + O_2 + N_2$

$P_{Balloon} = 1.5\ atm$

3ℓ

$P_{atm} = 1\ atm$

$P_{TOTAL} = P_{CO_2} + P_{O_2} + P_{N_2}$

Total Pressure $= \Sigma$ (Partial Pressures)

Dec 8-8:11 AM

$P_T V = n_T R T$

$P_{CO_2} V = \frac{n_{CO_2}}{n_{total}} RT$

Mole fraction

PART whole

$P_{CO_2} V = n_{CO_2} RT$

$P_{O_2} V = n_{O_2} RT$

$P_{N_2} V = n_{N_2} RT$

$P_T V = n_T RT$

Dec 8-8:19 AM

10/ 50, 54, 62

Dec 8-8:26 AM