Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 5J – Mol of a Solution - Molarity 20 Points

Define the following gas state of matter terms

Define Solution	Define Molarity

Molarity Equations for Solutions

M = Molarity (*mol/L*) n = Mol (*mol*) V = Liters (*L*)

$$M\ (mol/L) = \frac{n\ (mol)}{V\ (L)} \qquad n\ (mol) = M \bullet V\ (mol/L \bullet L) \qquad V\ (L) = \frac{n\ (mol)}{M\ (mol/L)}$$

Solve the following solution concentration problems

n = 1.94mol V = 2.48L
M = _____mol/L

$M = \frac{1.94\ mol}{2.48\ L}$

M = 0.78 mol/L

$M = \frac{n}{V}$ n = mol V = L

$= 0.78225\ldots$ → 0.78

n = 0.81mol V = 0.42L
M = _____mol/L

M =

M =

M = 2.63mol/L V = 2.48L
n = _____mol

n =

n =

n = 0.93 mol/L · 0.37 L

n = 0.34 mol (0.3441)

$n = M \times V$ $M = \frac{mol}{L}$ V = L

$\frac{mol}{L} \cdot L = \frac{mol \cdot \cancel{L}}{\cancel{L}} = mol$

n = 4.37mol M = 1.23mol/L
V = _____L

$V = \frac{4.37\ \cancel{mol}}{1.23\ \cancel{mol}/L}$

V = 3.55 L (3.55284...)

$V = \frac{n}{M}$ n = mol M = mol/L

$= \frac{mol}{\frac{mol}{L}}$

$= \frac{\cancel{mol}}{1} \cdot \frac{L}{\cancel{mol}} = L$

n = 1.74mol M = 3.28mol/L
V = _____L

V =

V =