IDEAL GASES

OBEY

(NON-IDEAL GAS)

(1)
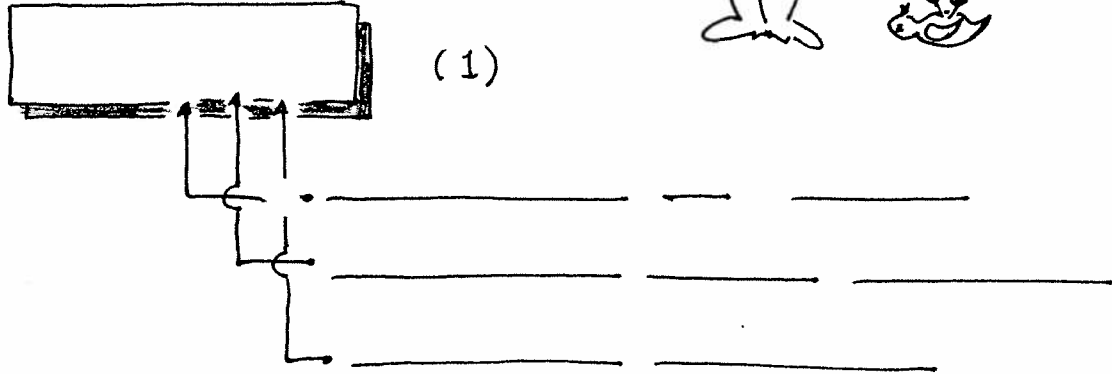
¿HOW DO YOU FIND m IF n IS KNOWN?

- DIVIDE EQ. 1 BY M
- MULTIPLY " " " "

$\Rightarrow$

$\Rightarrow$

IN $\dfrac{g}{mol}$ OR $\dfrac{kg}{k\text{-}mol}$ OR _____

WRITE AS MANY OTHER VERSIONS OF THE IDEAL GAS EQUATION AS YOU CAN:

-
-

-
-

MIXTURES OF GASES

TWO DIFFERENT WAYS TO INDICATE
Composition

ANALYSIS	ANALYSIS
$mf_i = $ _____	$y_i = $ _____

$mf_i =$

$y_i =$

$\sum mf_i = \underline{\hspace{2cm}}$ $\qquad\qquad$ $\sum y_i = \underline{\hspace{2cm}}$

¿HOW DO YOU FIND m_i IF YOU KNOW N_i ?

NOW FOR THE *MIXTURE* ...

-OR-

$= \underline{\hspace{2cm}}$

$\underline{\hspace{0.5cm}}$ DEFINES THE

SIMILARLY

$= \underline{\hspace{1.5cm}}$

APPARENT (AVERAGE)
IDEAL GAS CONSTANT
FOR MIXTURE
(MASS BASIS)

| DALTON'S MODEL | ASSUMES

- WRITE EQ. 1 FOR A MIXTURE
  SOLVE IT FOR P_{MIX}

$\qquad P_{MIX} = \qquad\qquad (2)$

- NOW WRITE EQ. 1 FOR *COMPONENT* i & SOLVE IT FOR P_i
  USING DALTON'S MODEL.

$\qquad P_i = \qquad\qquad (3)$

$\underline{\hspace{2cm}}$ $\qquad$ $\underline{\hspace{2cm}}$

WRITE A SENTENCE DEFINING PARTIAL PRESSURE!

PARTIAL PRESSURE IS

COMPARE ER. 3 TO ER. 2. HOW DOES P_i COMPARE TO P_{MIX}?

$$P_i =$$

AND $\therefore$

$$\Sigma P_i =$$