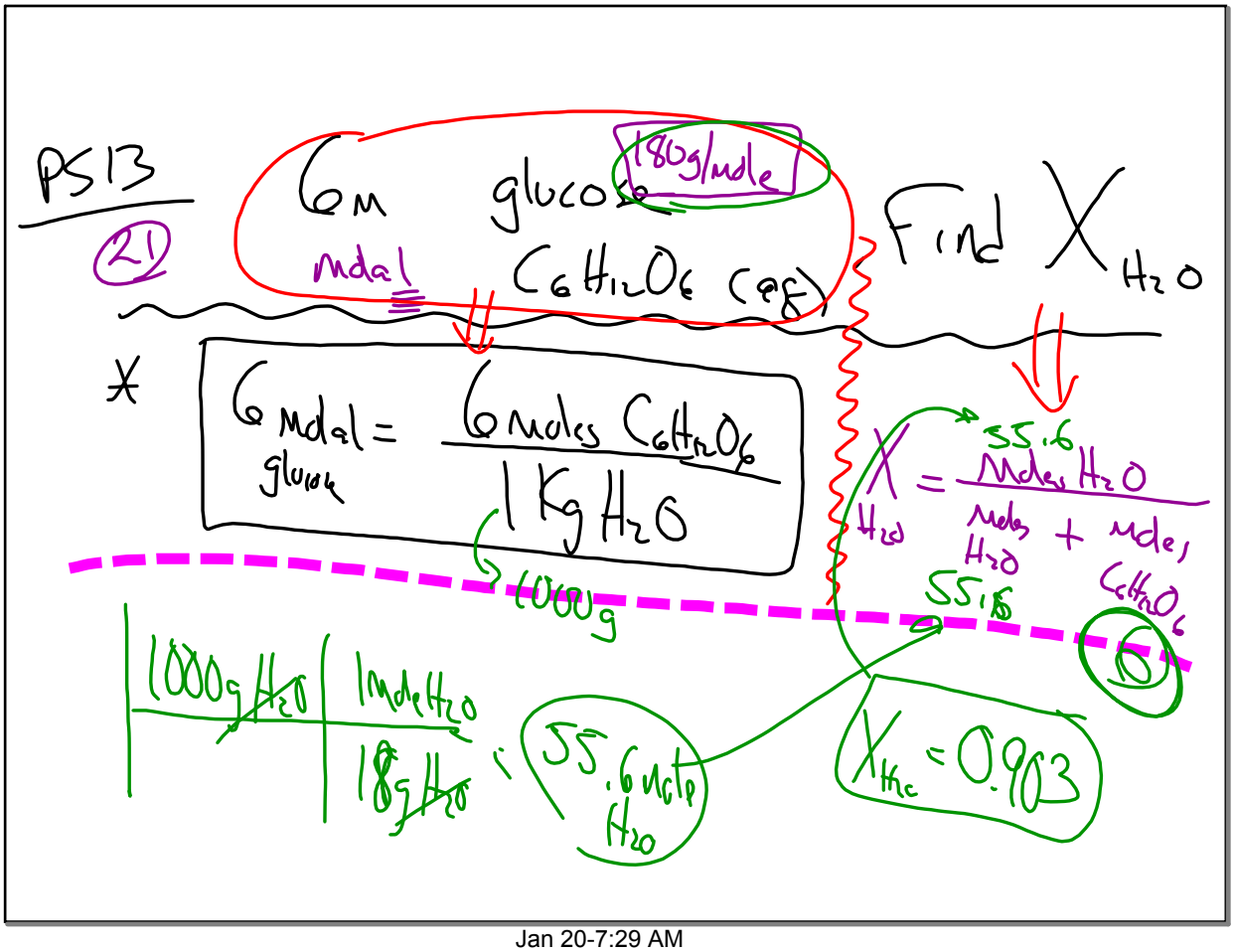
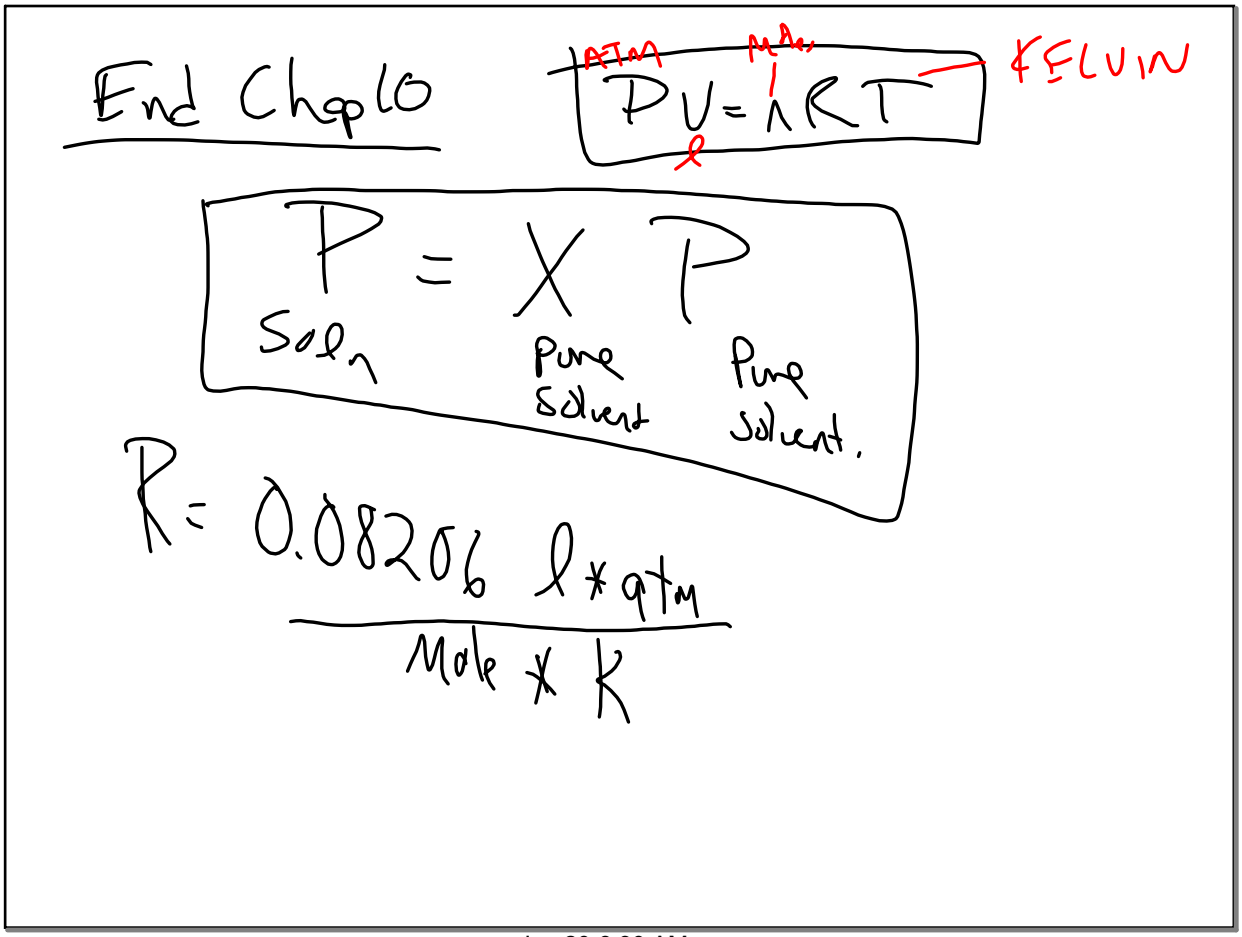
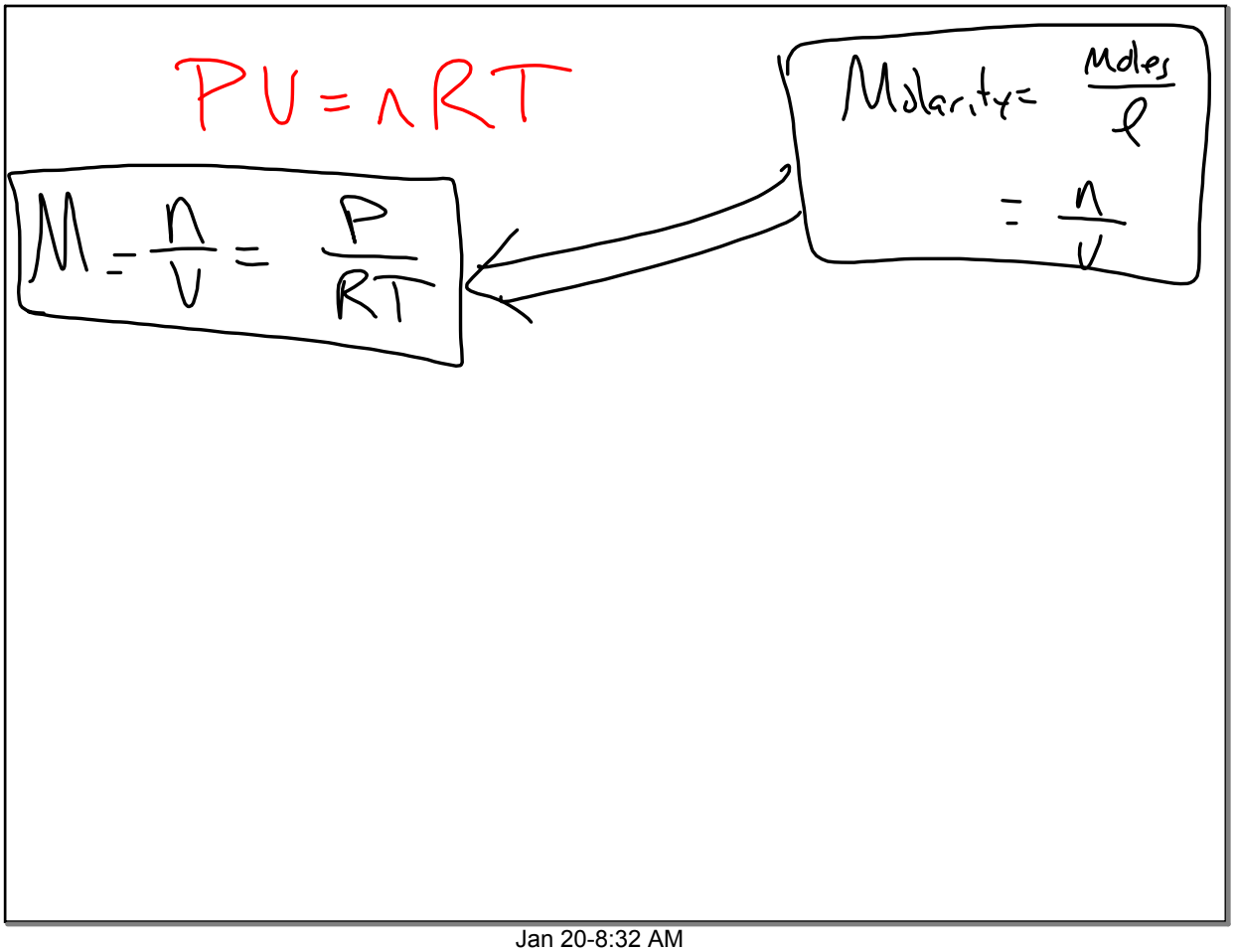


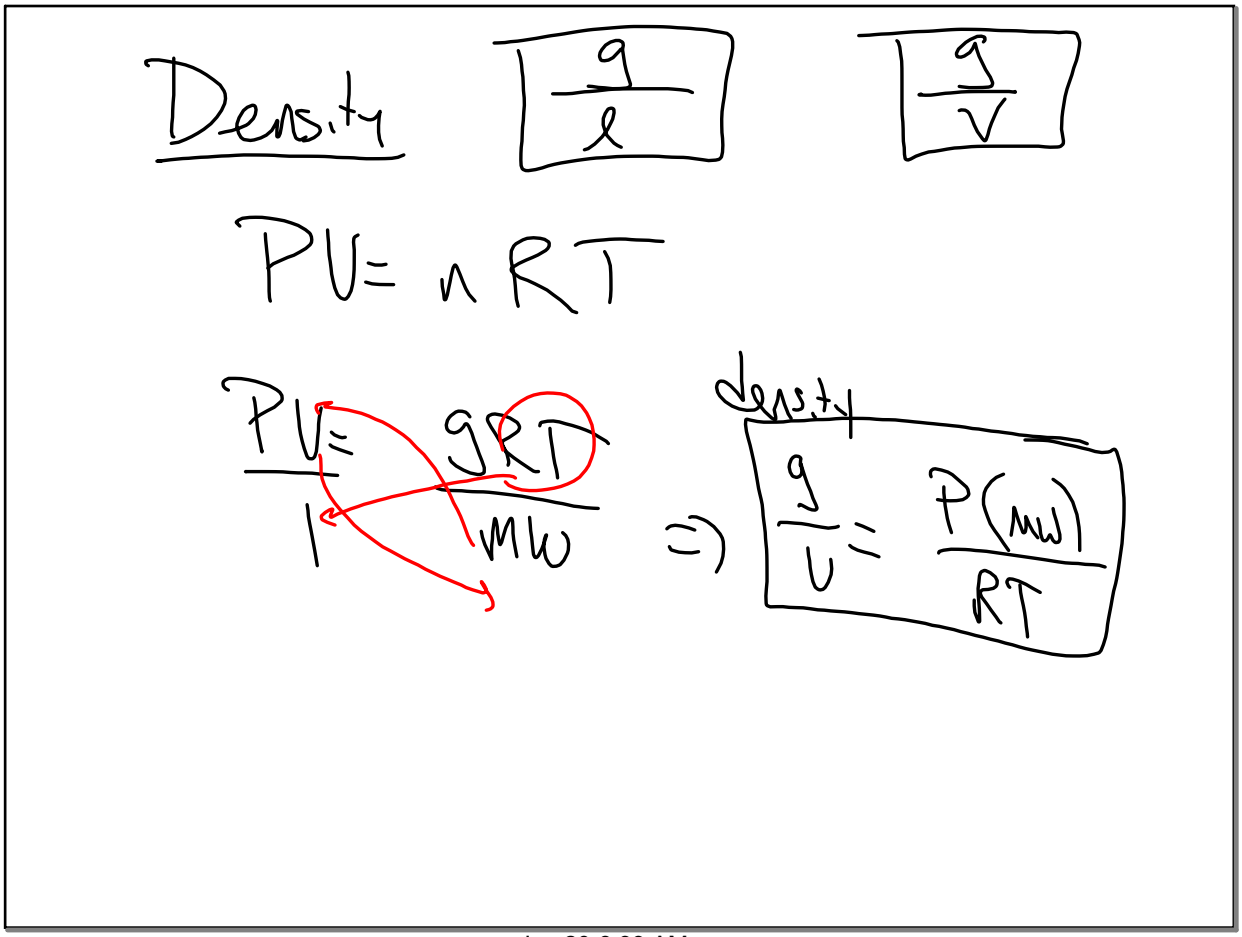

Jan 20-7:29 AM




Jan 20-8:30 AM




Jan 20-8:32 AM




Jan 20-8:33 AM

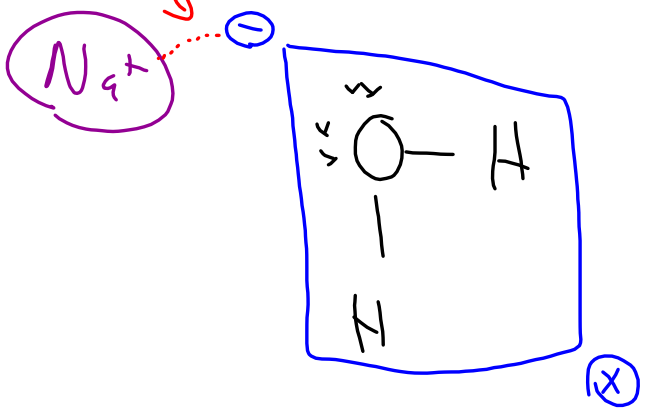
## 2019 Exam 4

① NaCl in $H_2O$

Ionic
$Na^+$
$Cl^-$

?

Polar Covalent




Jan 20-8:35 AM

⑪ $PV = nRT$

mass → 60g, P = 570 torr
V = 1 L, T = 25°C

$\frac{PV}{L} = \frac{gRT}{MW}$

MW = ?

$\frac{570\ \text{torr}}{760\ \text{torr}} \times 1\ \text{atm} = 0.075$ atm

$\frac{MW}{L} = \frac{gRT}{PV} = \frac{(60)(0.08206)(298)}{(0.075)(1)} = 19563.04$ g/mole

Jan 20-8:52 AM

(12) He + Ne + Ar = Total

1.5 + 2.0 + Ar = 8.4

$X_{Ar} = ?$

$Ar = 4.9$ atm

$P_{Ar} = X_{Ar} P_T$

$4.9 = X_{Ar}\ 8.4$

$X_{Ar} = 0.583$ atm

Jan 20-9:01 AM

(13) ~~a~~ $\Delta T = (i \times m) K$

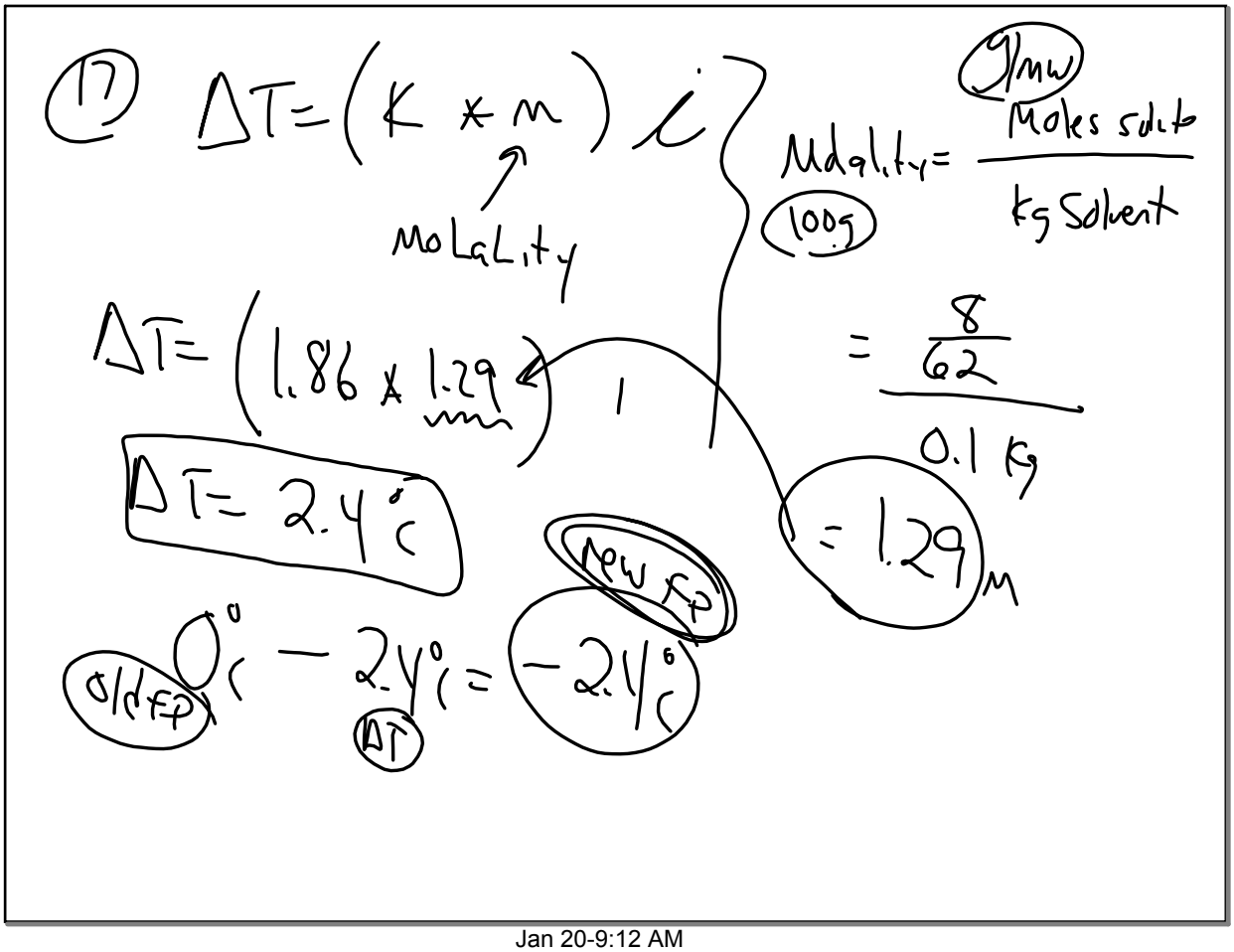
$(0.5 \times 2) = 1$ ⟸ *

(b) $(0.75 * 1) = .75$

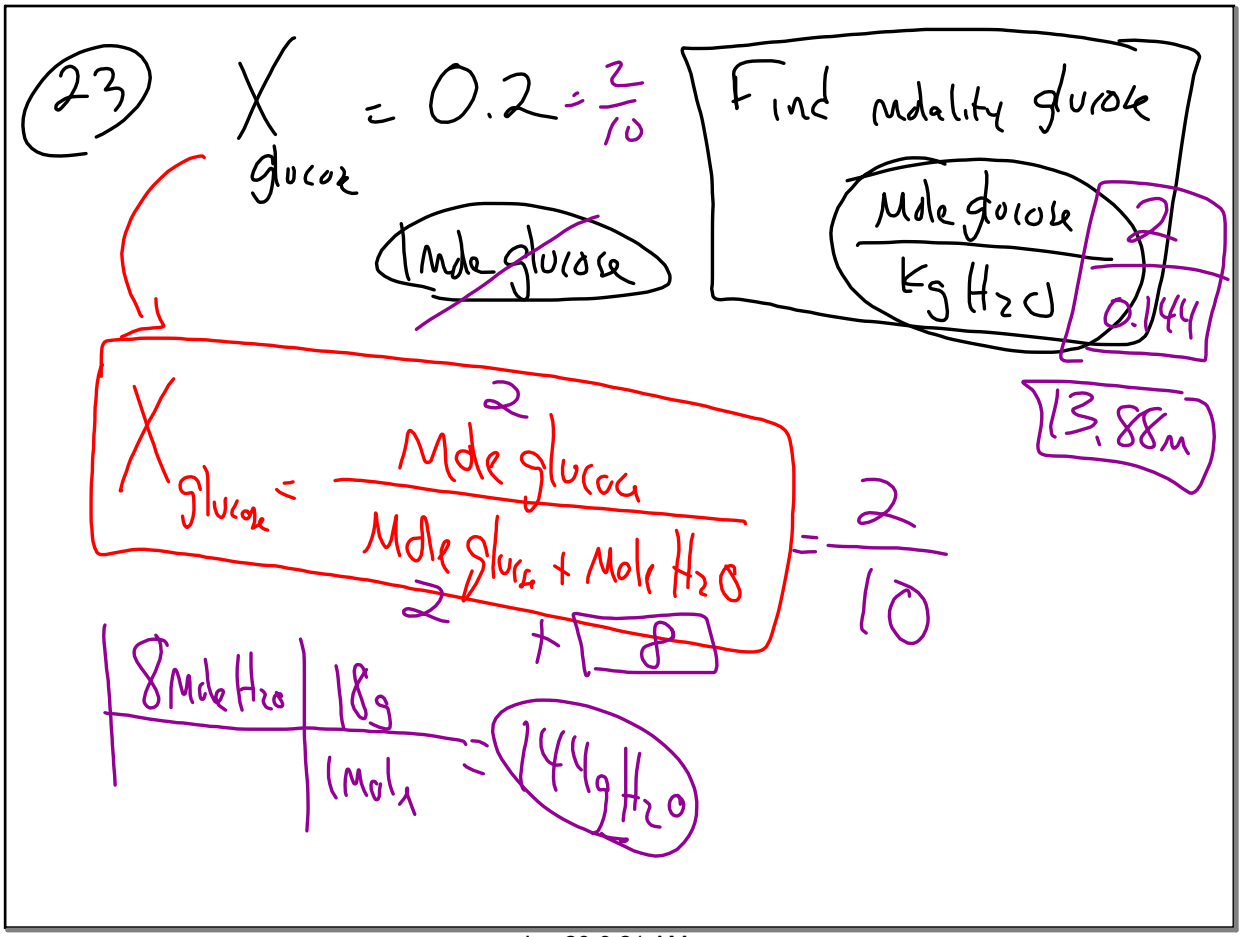
(c) $(0.75 * 1) = 0.75$

(d) $(0.24 * 4) = 0.96$

Jan 20-9:05 AM




Jan 20-9:12 AM




Jan 20-9:21 AM

(24) In BP 101.04°C

$K_b = 0.52$

$\Delta T = (K * m)i$

101.04 new BP

− 100 old BP

1.04 = ΔT

$1.04 = (0.52 * 1)i$

$i = 2$ $2_{ions} = K^+ + Cl^-$

Jan 20-9:26 AM

(25) $P_{decane} = 250 mm\ Hg$ 120°C

$VP_{soln} = ?$

0.97 mole Camphor

+ 7.04 mole Decane

$VP_{soln} = X_{solvent} P_{pure\ solvent}$

$= \left(\frac{7.04}{7.04 + 0.97}\right)(250)$

$= 219.79 mm\ Hg$

Jan 20-9:28 AM