F2016

(10) complete

$HNO_3(aq) + NaOH(aq) \Rightarrow NaNO_3(aq) + H_2O(l)$ (HOH)

complete ionic

$H^+ + NO_3^- + Na^+ + OH^- \rightarrow Na^+ + NO_3^- + H_2O$

net ionic

$H^+ + OH^- \rightarrow H_2O$

Jan 17-7:27 AM

(11) Solvent = decane VP 250 mmHg 120°C

$VP_{solvent} = ?$

0.970 mole Camphor (solute) + 1000g decane. MW 142 g/mole

$\frac{g}{MW} \frac{1000}{142} = 7.04$ mole decane

$VP_{soln} = X_{solvent} P^\circ_{pure\ solvent}$

$VP = \frac{7.04}{7.04 + 0.970} (RD)$

Jan 17-7:37 AM

(14) 1.96g Ti, $\frac{9.84\ KJ}{^{\circ}C}$, 61.98 g (ΔT)

$\frac{KJ}{Mole\ Ti}$

$$\frac{9.84\ KJ}{^{\circ}C} \left| \frac{61.98\ ^{\circ}C}{1.96\ g\ Ti} \right| = \frac{48\ g\ Ti}{Mole\ Ti}$$

Jan 17-7:48 AM

(17) $$\frac{4.2\ J}{g\ ^{\circ}C} \left| \frac{25\ ^{\circ}C}{0.9\ J} \right| \frac{}{500\ g} = 0.556\ ^{\circ}C$$

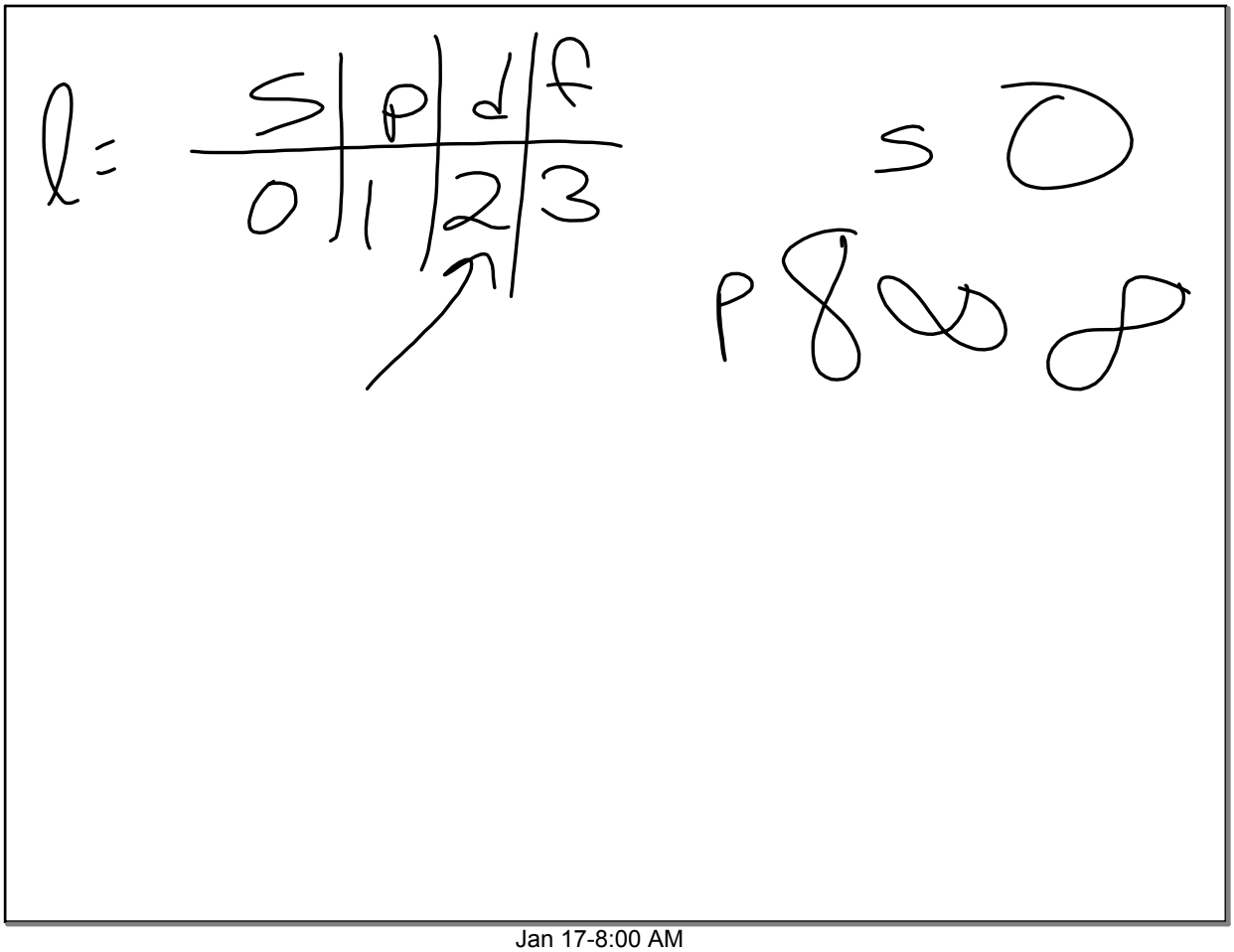
ΔT

$25\ ^{\circ}C + 0.556 = 25.556$

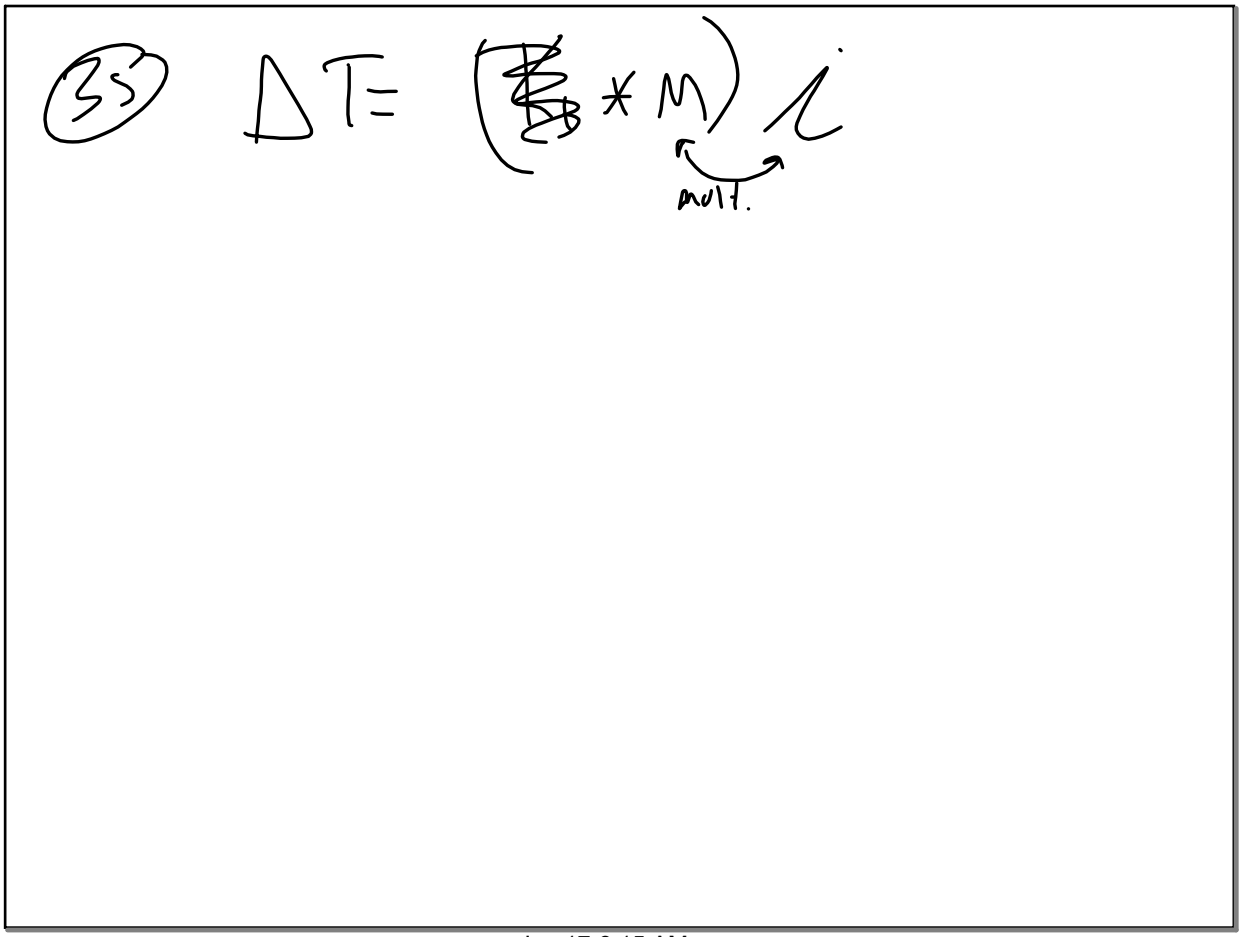
Start

25.6 °C

Jan 17-7:56 AM



Jan 17-8:00 AM



Jan 17-8:15 AM

(5) $H-C\equiv C-H + 2H-Cl \rightarrow Cl-C(H)(H)-C(H)(H)-Cl$

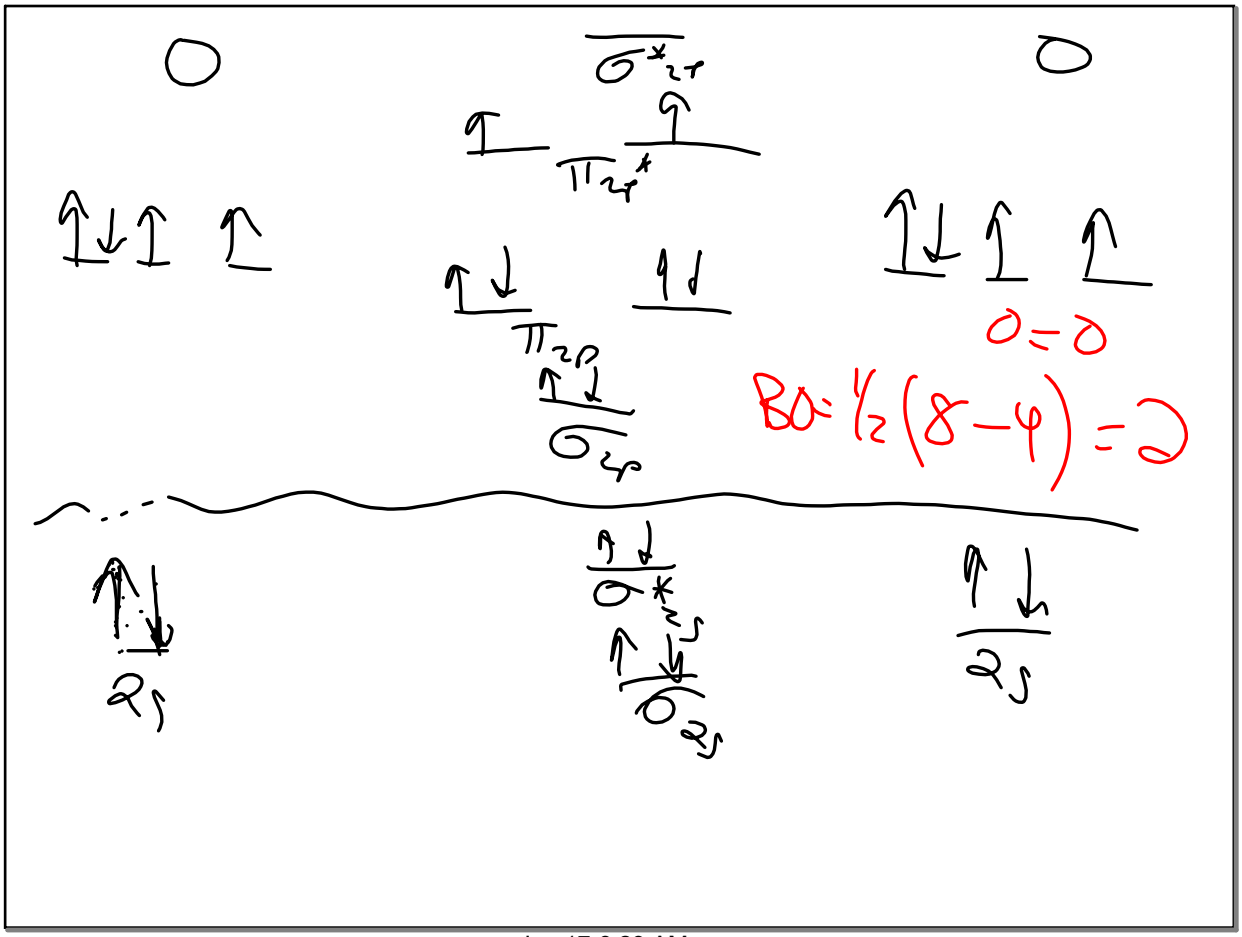
Bonds Broken − Bonds formed.

$C\equiv C$
$2\ C-H$
$2\ H-Cl$

$C-C$
$4\ C-H$
$2\ C-Cl$

$2527 - 2656 = -129$

Jan 17-8:18 AM



Jan 17-8:23 AM

$H_2 + Cl_2 \rightarrow 2HCl$

$\frac{1}{2}H_2 + \frac{1}{2}Cl_2 \rightarrow HCl$

$H_f =$ 1 mole product from elements

KJ/mole

Jan 17-8:26 AM

BP ↑

① BP D_{H_2O}

② BP 2g $CaCl_2$

BP 4g $CaCl_2$

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

$(0.52^{\circ}C/m)$

EXPT

new BP

new BP

Jan 17-8:41 AM