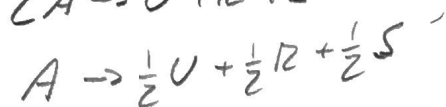
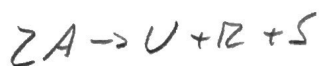


Reiten, øving 3, Vegard G. Jervell

• Oppg. 3a) $P = \frac{n_T RT}{V} = C_T RT$

$$C_{A0} = \frac{P_0}{RT_0} = 0,026 \frac{\text{mol}}{\text{L}}$$



$$C_A = C_{A0} (1 - X_A)$$

$$C_U = \frac{1}{2} C_{A0} X_A$$

$$C_R = \frac{1}{2} C_{A0} X_A$$

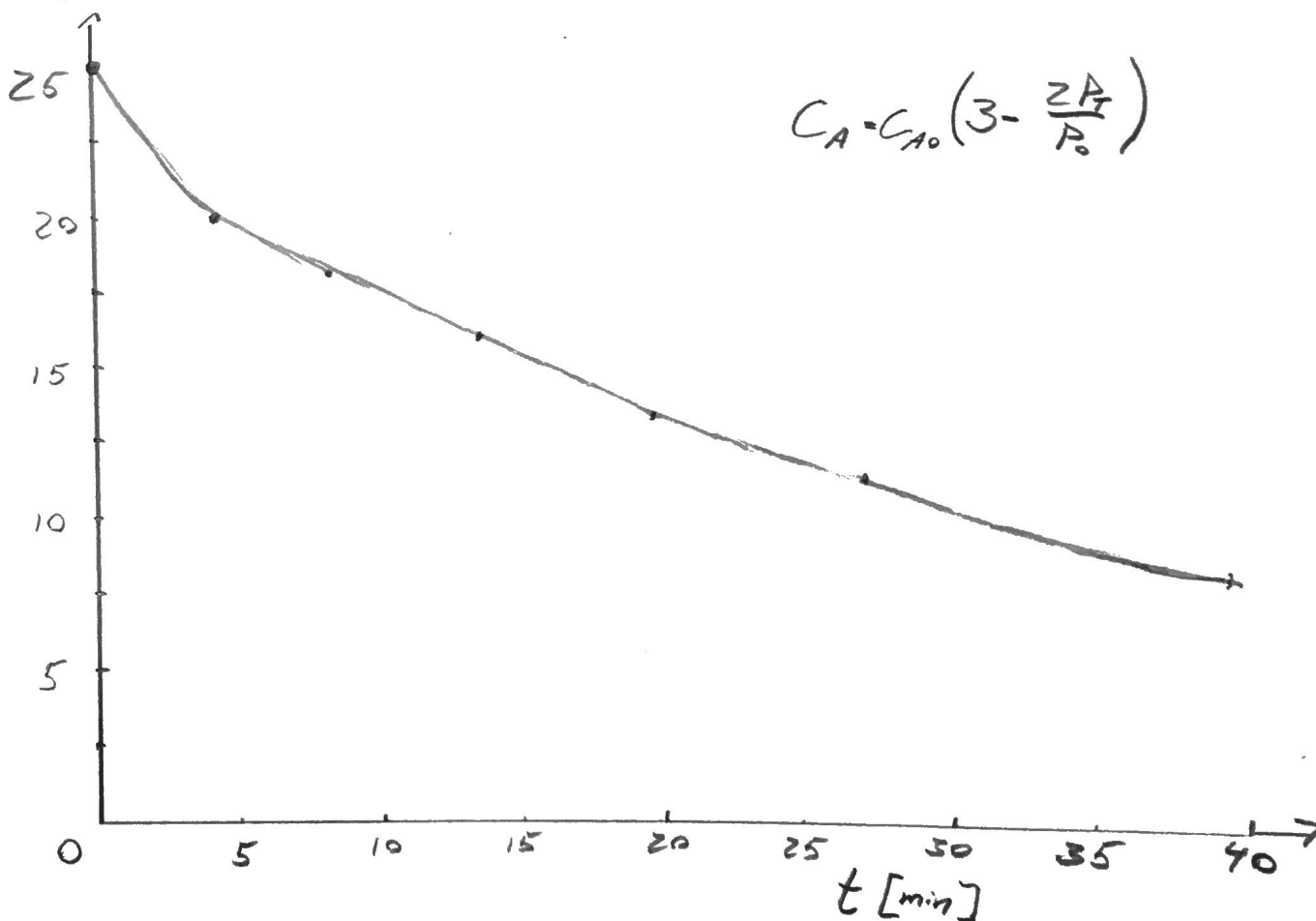
$$C_S = \frac{1}{2} C_{A0} X_A$$

$$C_T = C_{A0} \left(1 + \frac{1}{2} X_A \right) = \frac{P_T}{RT}$$

$$X_A = \frac{2P_T}{C_{A0} RT} - 2$$

$$X_A = \frac{2P_T}{P_0} - 2$$

$$C_A \left[\frac{\text{mmol}}{\text{L}} \right]$$



$$C_A = C_{A0} \left(3 - \frac{2P_T}{P_0} \right)$$

$$I) -r_A = k C_A^\alpha$$

$$II) -r_A = \frac{dC_A}{dt}$$

$$-\frac{dC_A}{dt} = k C_A^\alpha$$

$$\frac{-dC_A}{C_A^\alpha} = k dt$$

$$\alpha = 0$$

$$C_A = C_{A0} - kt$$

$$1$$

$$\ln\left(\frac{C_A}{C_{A0}}\right) = -kt$$

$$C_A = C_{A0} e^{-kt}$$

$$-k = a$$

$$\ln(C_{A0}) = b$$

$$2$$

$$\frac{1}{C_A} = \frac{1}{C_{A0}} + kt$$

$$C_A = \frac{C_{A0}}{1 + k C_{A0} t}$$

$$\frac{1}{C_{A0}} = b, k = a$$

kjører lineærregresjon i Python
av $\ln(C_A)$ mot t og $\frac{1}{C_A}$ mot
 t . plottet deretter C_A mot t
med koeffisientene fra regresjonen

1. ordens potet best.

$$k = 0,0296$$

$$\alpha = 1$$