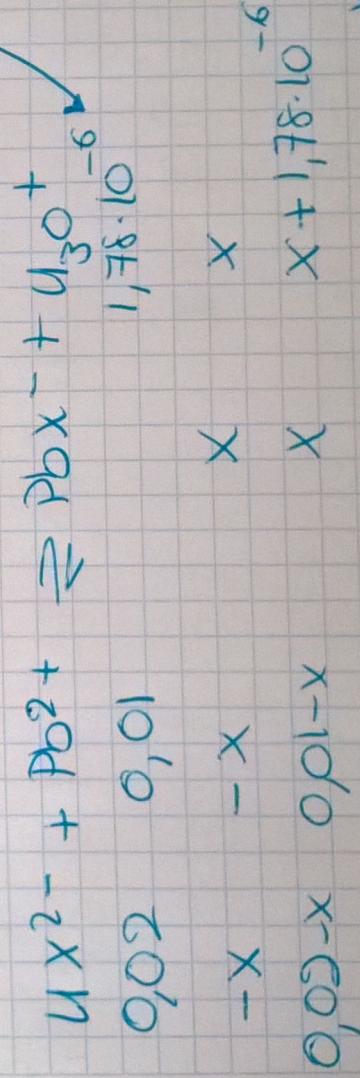
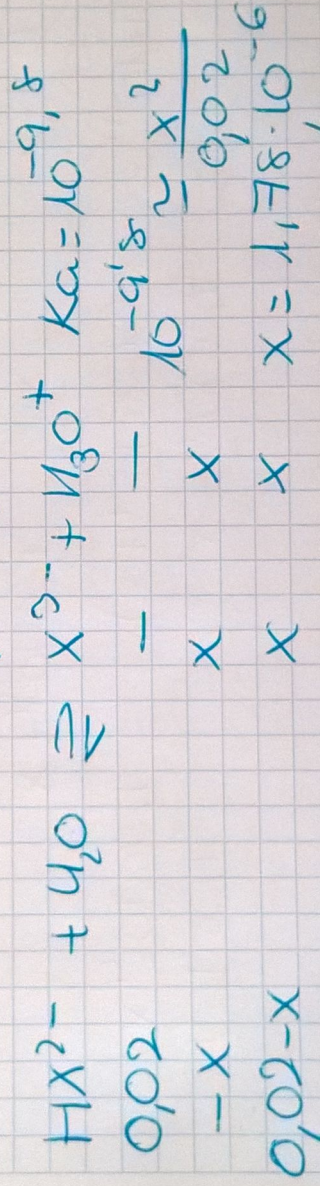
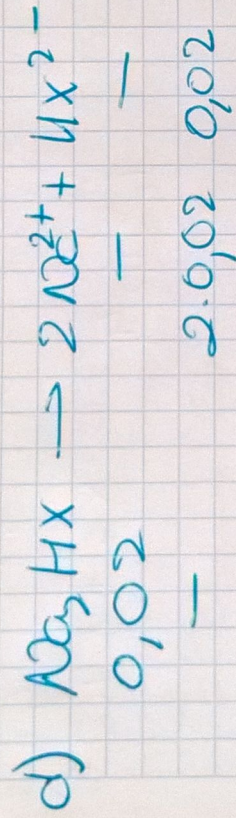


$$K' = \frac{[\text{PbX}^-] \cdot [\text{H}_3\text{O}^+]}{[\text{HX}^{2-}] [\text{Pb}^{2+}]}$$



$$K' = 5,01 \cdot 10^5 = \frac{1,78 \cdot 10^{-6} x + x^2}{2 \cdot 10^{-4} - 0,03x + x^2} \Rightarrow x = \begin{cases} x_1 = 0,02 \\ x_2 = 9,98 \cdot 10^{-3} \end{cases}$$

$$\text{pH} = -\log(1,78 \cdot 10^{-6} + 9,98 \cdot 10^{-3}) = 2$$