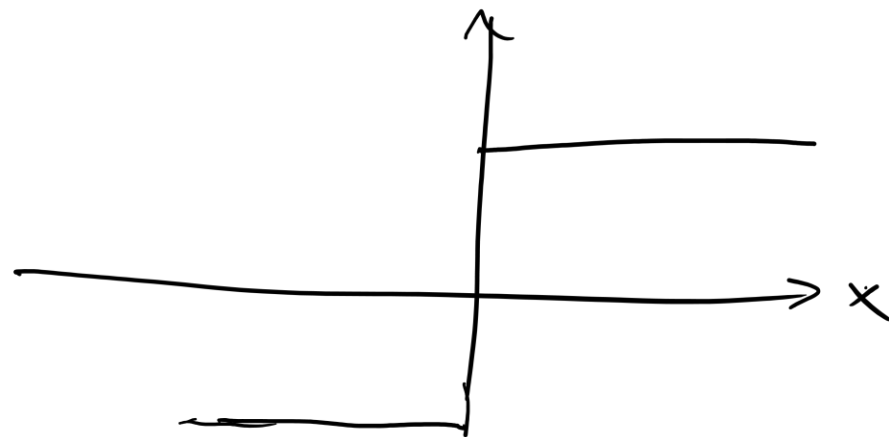


$|x|'$

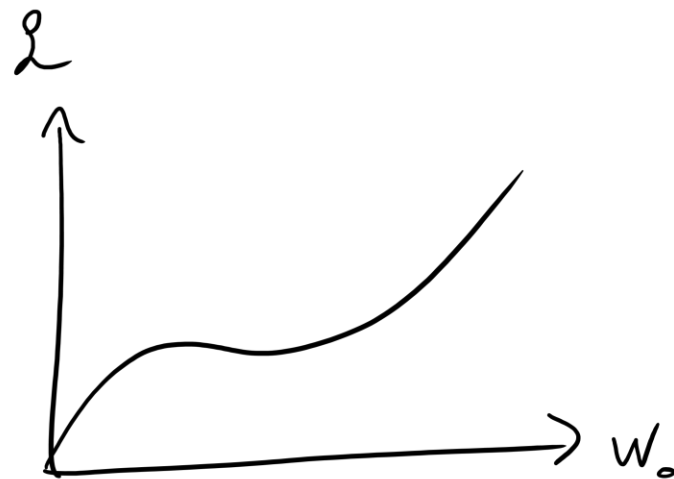
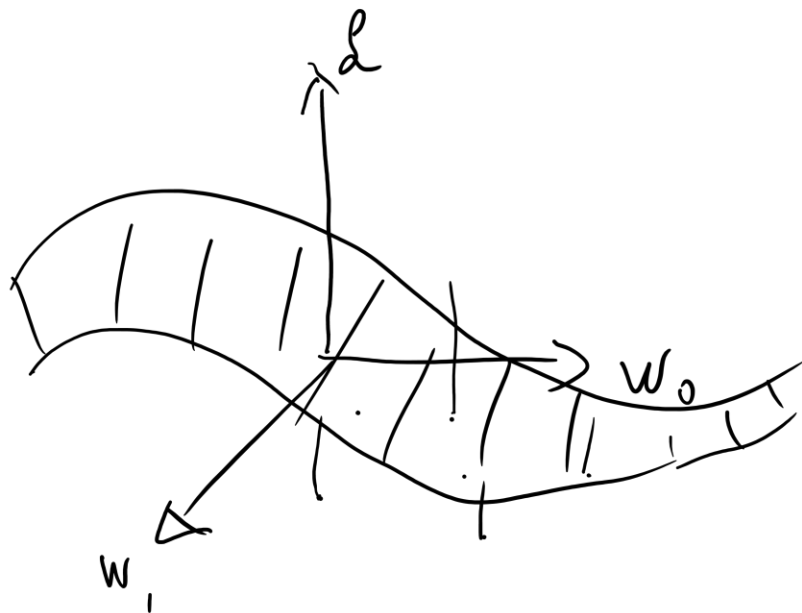
$$\frac{d|x|}{dx} = \begin{cases} 1 \\ -1 \end{cases}$$



$$L_{MAE} = \frac{1}{N} \sum_{i=1}^N |y_i - \hat{y}_i|, \quad \hat{y}_i = w_0 + w_1 \cdot x_i$$

$$= \frac{1}{N} \sum_{i=1}^N |y_i - (w_0 + w_1 \cdot x_i)|, \quad \{y_i, x_i\}_{i=1}^N \text{ kjente størrelser}$$

$$L_{MAE} = L_{MAE}(w_0, w_1)$$



$$p(x|C_0) = \frac{1}{\beta^\alpha \Gamma(\alpha)} x^{\alpha-1} e^{-x/\beta}, \quad \alpha=2, \beta \text{ er ukjent.} \quad \left[\begin{array}{l} e^x \\ \ln(e^x) = x \end{array} \right]$$

x_0^1, x_0^2, \dots

$$X \in \{x_0^1, x_0^2, x_0^3, \dots, x_0^{n_0}\} \longrightarrow \{x_1, x_2, x_3, \dots, x_{n_0}\}$$

$$\begin{aligned} l(\beta) &= p(x_0^1) \cdot p(x_0^2) \cdot p(x_0^3) \cdot \dots \cdot p(x_0^{n_0}) = \prod_{i=1}^{n_0} p(x_0^i) \\ &= \left(\frac{1}{\beta^2 \Gamma(2)} x_1 \cdot e^{-x_1/\beta} \right) \cdot \left(\frac{1}{\beta^2 \Gamma(2)} x_2 e^{-x_2/\beta} \right) \cdot \dots \cdot \frac{1}{\beta^2 \Gamma(2)} x_{n_0} e^{-x_{n_0}/\beta} \end{aligned}$$

$$\ln(a \cdot b) = \ln a + \ln b, \quad \ln(a \cdot b \cdot c \cdot \dots \cdot g) = \ln a + \ln b + \ln c + \dots + \ln g$$

$$\ln(l(\beta)) = \mathcal{L}(\beta) = \sum_{i=1}^{n_0} \ln\left(\frac{1}{\beta^2 \Gamma(2)} x_i e^{-x_i/\beta}\right)$$

$$\ln\left(\frac{1}{a}\right) = -\ln a$$

$\ln a/b = \ln a - \ln b$