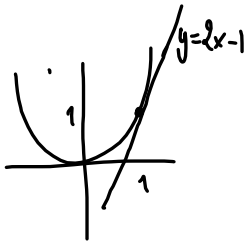
Linearisering

$f(x) = x^2$, $x = 1$ $(1,1)$

linearisera i $x = 1$

$y - 1 = 2 \cdot (x - 1)$

$y = 2x - 1$



$\bar{a}$

$F: \mathbb{R}^n \longrightarrow \mathbb{R}^m$

$$T_{\bar{a}} F(\bar{x}) = \underbrace{F(\bar{a})}_{\bar{b}} + \underbrace{F'(\bar{a})}_{A}(\bar{x} - \bar{a})$$

$$= \bar{b} + A \cdot \bar{x} - A \cdot \bar{a}$$

$$= A\bar{x} + \underbrace{\bar{b} - A\bar{a}}_{\bar{c}}$$

Linearisering till F i $\bar{x} = \bar{a}$.

A: Jacobi i $\bar{x} = \bar{a}$