

$$\frac{d}{dx} f^2(x) \Big|_{x_0} = \frac{d}{dx} f[f(x)] \Big|_{x_0}$$

Kettenregel

$$= f'[f(x_0)] \cdot f'(x_0)$$

innere Ableitung

$$= f'(x_1) \cdot f'(x_0) \quad \text{mit } x_1 = f(x_0)$$

$$\frac{d}{dx_0} f^N(x_0) = \prod_{i=0}^{N-1} f'(x_i)$$