Beispiele für das (gedämpfte) Newton-Verfahren

- $f(x) = \cosh(x) - 1.0 - \frac{x}{10.0}, x_0 = 0.3$
- $f(x) = \tanh(x), x_0 = 1.0886594924826533681$
- $f(x) = x - \cos(x)\,, x_0 = 0.3$
- $f(x) = \frac{\pi}{2.0} - x - \cos(x), x_0 = 1.5$
- $f(x) = x - \sin(x)\,, x_0 = 0.3$
- $f(x) = x - \exp(-x)\,, x_0 = 0.0$
- $f(x) = \exp\left(\frac{1}{3} - \frac{x}{2}\right) + x^4 + \frac{8x^3}{3} - \frac{67x^2}{24} + \frac{50x}{27} - \frac{257}{162}, x_0 = 1.0$
- $f_{K,r}(x) = Kx^{m+1} - (K + r)x^m + r, K = 50000, r = 1200, m = 48, x_0 = 1$
- $f_{\alpha,s_0,s_1}(x) = \alpha * (s_0 + 2s_0x + (1 + s_0 - s_1)x^2 + 2x^3 + x^4) - x^2\big((1 - s_1) + 3x + 3x^2 + x^3\big)$, mit $\alpha = \frac{1}{332965}, (s_0, s_1) \in \{(-1,1), (1,1), (-1,-1)\}, x_0 = 0.5$ (aka Lagrange-Punkte L_1, L_2, L_3)