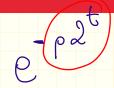
Advantages and drawbacks

Extremly fast there exists $C, \rho > 0$ **such that**

$$||x_t - x^\star||^2 \le \underline{C}e^{-\rho 2^t}.$$



- Computationally expensive: requires $\sim n^3$ operations to compute the inverse of the $n \times n$ matrix $H_f(x_t)$.
- In non-convex setting, Newton's method gets attracted by any critical points (which could be saddle points/maximas...).

Quasi-Newton methods: try to approximate $H_f(x_t)$ by matrices B_t that are easier to compute. $R_t = R_t - R_t$

Improvements 17/1