

$$\exp(x) = \sum_{k=0}^{\infty} \frac{1}{k!} x^k$$

$$\cos(x) = \sum_{k=0}^{\infty} \frac{(-1)^k}{(2k)!} x^{2k}$$

pro jaká  $x \in \mathbb{R}$ ?  $\leftarrow$  pro všechna  $x \in \mathbb{R}$

Zbytek Taylorova polynomu

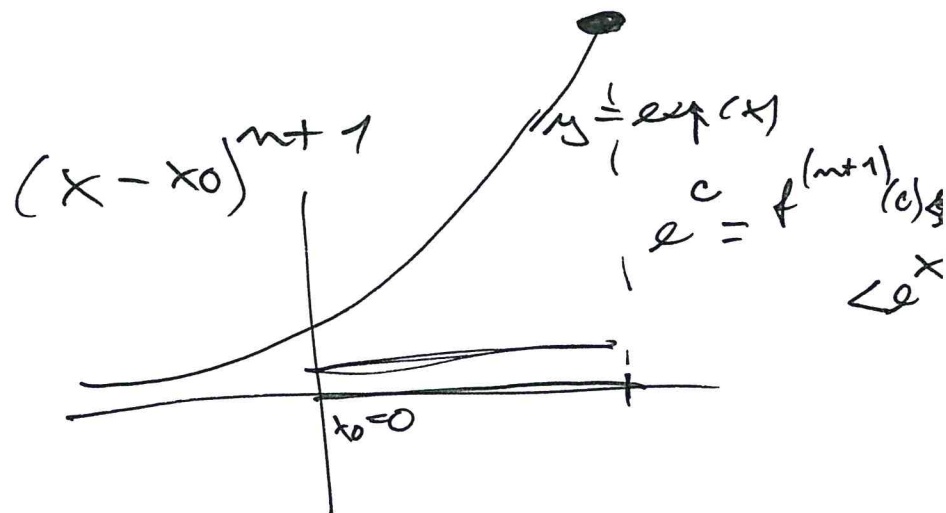
$$R_n(x) = f(x) - \cancel{T_n(x)} \xrightarrow[n \rightarrow \infty]{?} \textcircled{0} \dots f(x) = T(x)$$

$\downarrow$   
 $T(x)$

$x$  pevně dáé  
 $f(x) = \exp(x)$

Lagrangeův tvar zbytku

$$R_n(x) = \frac{1}{(n+1)!} f^{(n+1)}(c) (x-x_0)^{n+1}$$



$$\frac{1}{(n+1)!}$$

$$\frac{(x-x_0)^{n+1}}{x^{n+1}}$$

$$\xrightarrow{2}$$

