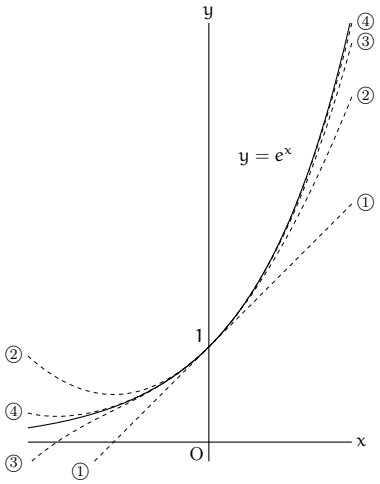
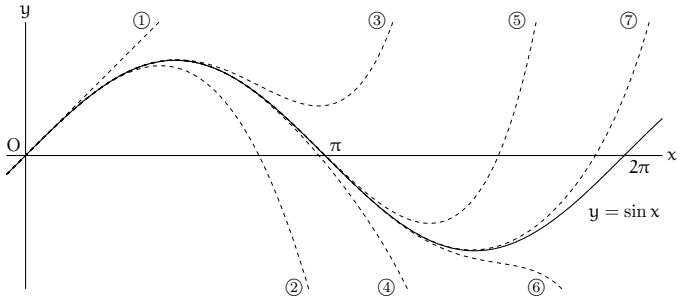
⋆ Taylor 展開の例



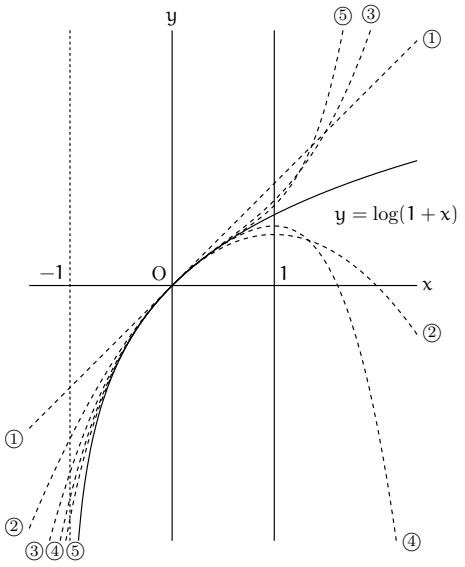
$$e^x = 1 + x + \frac{1}{2!}x^2 + \cdots + \frac{1}{n!}x^n + \cdots \quad (x \in \mathbb{R})$$

ⓟ : $y = 1 + \sum_{k=1}^{p} \frac{1}{k!}x^k$



$$\sin x = x - \frac{1}{3!}x^3 + \frac{1}{5!}x^5 - \cdots + \frac{(-1)^{n+1}}{(2n-1)!}x^{2n-1} + \cdots \quad (x \in \mathbb{R})$$

ⓟ : $y = \sum_{k=1}^{p} \frac{(-1)^{k+1}}{(2k-1)!}x^{2k-1}$



$$\log(1+x) = x - \frac{1}{2}x^2 + \cdots + \frac{(-1)^{n+1}}{n}x^n + \cdots$$
$$(-1 < x \leq 1)$$

ⓟ : $y = \sum_{k=1}^{p} \frac{(-1)^{k+1}}{k}x^k$