Standard Taylor series at $x = 0$ (Maclaurin series)

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\begin{aligned}
e^x &= 1 + x + \frac{1}{2}x^2 + \frac{1}{6}x^3 + \cdots = \sum_{n=0}^{\infty} \frac{1}{n!}x^n \\
\sin x &= x - \frac{1}{6}x^3 + \frac{1}{120}x^5 - \cdots = \sum_{n=0}^{\infty} (-1)^n \frac{1}{(2n+1)!}x^{2n+1} \\
\cos x &= 1 - \frac{1}{2}x^2 + \frac{1}{24}x^4 - \cdots = \sum_{n=0}^{\infty} (-1)^n \frac{1}{(2n)!}x^{2n} \\
\frac{1}{1-x} &= 1 + x + x^2 + x^3 + \cdots = \sum_{n=0}^{\infty} x^n \\
\frac{1}{1+x} &= 1 - x + x^2 - x^3 + \cdots = \sum_{n=0}^{\infty} (-1)^n x^n \\
\ln(1+x) &= x - \frac{1}{2}x^2 + \frac{1}{3}x^3 - \frac{1}{4}x^4 + \cdots = \sum_{n=0}^{\infty} (-1)^n \frac{1}{n+1}x^{n+1} \\
&= \sum_{n=1}^{\infty} (-1)^{n+1} \frac{1}{n}x^n \\
\frac{1}{1+x^2} &= 1 - x^2 + x^4 - x^6 + \cdots = \sum_{n=0}^{\infty} (-1)^n x^{2n} \\
\tan^{-1} x &= x - \frac{1}{3}x^3 + \frac{1}{5}x^5 - \frac{1}{7}x^7 + \cdots = \sum_{n=0}^{\infty} (-1)^n \frac{1}{2n+1}x^{2n+1}
\end{aligned}
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