

÷ Remember Expansion ÷

$$(1) \quad e^{ax} = 1 + \frac{ax}{1!} + \frac{a^2 x^2}{2!} + \frac{a^3 x^3}{3!} + \dots \quad \left. \vphantom{\frac{a^3 x^3}{3!}} \right\} \text{Exponential}$$

$$(2) \quad \log(1+x) = x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} + \frac{x^5}{5} + \dots \quad \left. \vphantom{\frac{x^5}{5}} \right\} \log$$

$$(3) \quad \log(1-x) = -x - \frac{x^2}{2} - \frac{x^3}{3} - \frac{x^4}{4} - \frac{x^5}{5} + \dots$$

$$(4) \quad \sin x = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \dots$$

$$(5) \quad \sinh x = x + \frac{x^3}{3!} + \frac{x^5}{5!} + \frac{x^7}{7!} + \dots$$

$$(6) \quad \cos x = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \frac{x^6}{6!} + \frac{x^8}{8!} + \dots$$

$$(7) \quad \cosh x = 1 + \frac{x^2}{2!} + \frac{x^4}{4!} + \frac{x^6}{6!} + \dots$$

trigonometry