

Some Taylor Series

$$\frac{1}{(1-x)} = 1 + x + x^2 + x^3 + x^4 + \dots \quad \text{for } |x| < 1$$

$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} + \dots \quad \text{for all } x$$

$$\ln(1+x) = 1 + x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + \dots \quad \text{for } |x| < 1$$

$$\cos x = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} + \dots \quad \text{for all } x$$

$$\sin x = x - \frac{x^3}{3!} + \frac{x^5}{5!} + \dots \quad \text{for all } x$$