

Math formula

$$\exp(x) \simeq 1 + \frac{1}{1!}x^1 + \frac{1}{2!}x^2 + \frac{1}{3!}x^3$$

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

$$\sin(x) \simeq x - \frac{1}{3!}x^3 + \frac{1}{5!}x^5 - \frac{1}{7!}x^7 + \dots$$

$$\sin(\alpha + \beta) = \sin(\alpha) \cos(\beta) + \cos(\alpha) \sin(\beta)$$

$$\cos(\alpha + \beta) = \cos(\alpha) \cos(\beta) - \sin(\alpha) \sin(\beta)$$

$$\exp(x) \simeq 1 + x \text{ for small } x$$

$$\ln(1 + x) \simeq x \text{ for small } x$$

$$\sqrt{1 + x} \simeq 1 + \frac{1}{2}x \text{ for small } x$$

$$\int \cos(x) dx = \sin x$$

$$\int \sin(x) dx = -\cos x$$

$$\int \frac{1}{x} dx = \ln x$$

$$e^{i\theta} = \cos(\theta) + i \sin(\theta)$$