

$$x = \sin(t)$$

$$x \approx t$$

$$x \approx t - \frac{1}{6}t^3$$

$$x \approx t - \frac{1}{6}t^3 + \frac{1}{120}t^5$$

$$x \approx t - \frac{1}{6}t^3 + \frac{1}{120}t^5 - \frac{1}{5040}t^7$$