Form of Continuous Time Fourier Series Coefficients

$$x(t) = \sum_{k=-\infty}^{\infty} \left(a_k \cdot e^{j \cdot k \cdot \omega_o \cdot t} \right)$$

$$a_k := \frac{1}{T} \cdot \int_0^T x(t) \cdot e^{-j \cdot k \cdot \omega_o \cdot t} \, dt$$

where

$$\omega_o := \frac{2 \cdot \pi}{T} \qquad \text{and T is the fundamental period}$$