

Hint ∇

For the continuous-time periodic signal

$$x(t) = 2 + \cos\left(\frac{2\pi}{3}t\right) + 4 \sin\left(\frac{5\pi}{3}t\right).$$

determine the fundamental frequency ω_0 and the Fourier series coefficients a_k such that

$$x(t) = \sum_{k=-\infty}^{\infty} a_k e^{jk\omega_0 t}.$$

our notation is $\sum_{k=-\infty}^{\infty} X[k] e^{jk\omega_F t}$ where $\omega_F = 2\pi f_F$

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We didn't talk about this in class, but any constant term, like 2, is the "DC term" with the zero-th harmonic, ~~is~~ i.e. $X[0]$