$$W_0 = \frac{2\pi}{6} = \frac{\pi}{3}$$

$$a_0 = \frac{1}{T}\int_T x(t)dt = \frac{1}{6}\left(\int_0^3 1\,dt + \int_3^4 3\,dt\right) = 1$$

$$a_k = \frac{1}{T}\int_T x(t)\,e^{-jk\pi t/3}dt = \frac{1}{6}\left(\int_0^3 e^{-jk\pi t/3}dt + \int_3^4 3e^{-jk\pi t/3}dt\right)$$

$$= \frac{1}{6}\left(\frac{e^{-jk\pi t/3}}{-jk\pi/3}\Big|_0^3 + 3\cdot\frac{e^{-jk\pi t/3}}{-jk\pi/3}\Big|_3^4\right)$$

$$= \frac{1}{6}\left(\frac{e^{-jk\pi}}{-jk\pi/3} + \frac{1}{jk\pi/3} + 3\cdot\frac{e^{-jk4\pi/3}}{-jk\pi/3} + 3\cdot\frac{e^{-jk\pi}}{jk\pi/3}\right)$$

$$= \frac{j\cdot e^{-jk\pi}}{2k\pi} - \frac{j}{2k\pi} + \frac{3j\,e^{-jk4\pi/3}}{2k\pi} - \frac{3j\,e^{-jk\pi}}{2k\pi}$$

$$= \frac{1}{2k\pi}\left(-2j\cdot e^{-jk\pi} - j + 3j\,e^{-jk4\pi/3}\right)$$

$$x(t) = 1 + \sum_{k=1}^{\infty}\Big[\frac{1}{2k\pi}\left(3j\,e^{-jk4\pi/3} - j - 2j\,e^{-jk\pi}\right)e^{jk\pi t/3}$$
$$- \frac{1}{2k\pi}\left(3j\,e^{jk4\pi/3} - j - 2j\,e^{jk\pi}\right)e^{-jk\pi t/3}\Big]$$

Method 2:

Two rectangular wave: $C_0 = \sum \frac{TX_0}{T_0} = \frac{3\times1}{6} + \frac{1\times3}{6} = 1$

$C_K = \sum \frac{TX_0}{T}\,\mathrm{sinc}\left(\frac{TkW_0}{2\pi}\right)$

$$x(t) = \sum_{k=-\infty}^{\infty}\frac{2}{3}\,\mathrm{sinc}\left(\frac{2k}{3}\right)e^{-jk\frac{2\pi}{3}}e^{jk\frac{\pi}{3}t} + \sum_{k=-\infty}^{\infty}\frac{1}{3}\,\mathrm{sinc}\left(\frac{k}{6}\right)e^{-jk7\pi/6}e^{jk\pi t/3}$$

Sketch: