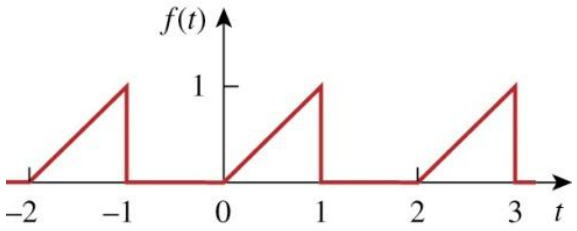
All problems use the following periodic waveform $g(t)$. **For all problems give numeric answers**, e.g. not $2/\pi$ but 0.6366.



P1 Find: T, f_o, ω_o.

P2 Find: The trig Fourier Series coefficients a_0, a_1, a_2, b_1, b_2 for $f(t)$ above, so $a_0+a_1\cos(\omega_o t)+b_1\sin(\omega_o t)+a_2\cos(2\omega_o t) + b_2 \sin(2\omega_o t)$ approximates $f(t)$. **The answers must be *numeric*, e.g. not $2/\pi$ but 0.6366.**

P3 Find: The coefficients A_0, A_1, A_2, ϕ_1, ϕ_2 so that $A_0 + A_1 \cos(\omega_o t + \phi_1) + A_2 \cos(2\omega_o t + \phi_2)$ approximates $f(t)$. Keep the answers must be numeric, e.g. not $2/\pi$ but 0.6366.

P4 Find: Sketch the amplitude spectra and phase spectra of g(t) for $0 \le \omega \le 2\omega_o$. Remember to label the ω axis with numbers (e.g. not $2\omega_o$ but 2.52).