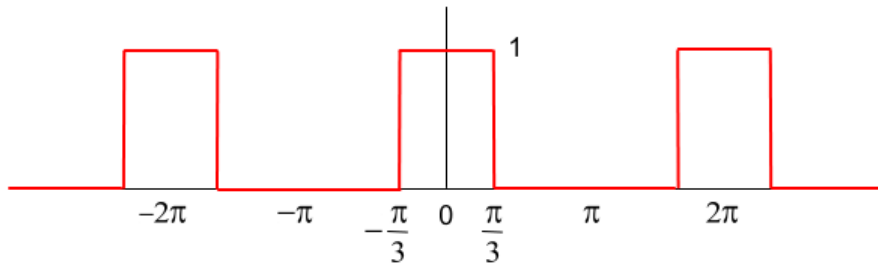


HW R1. Fourier Series.

Find the Fourier Series for the periodic wave shown below. Your basic cycle for this repeating pattern is defined over our standard region $-\pi \leq x \leq \pi$, symmetric about the origin, where the pulse is $1/3$ the period (or wavelength) of the periodic wave.



Pulse Train with Duty Cycle $33\frac{1}{3}\%$

For full credit, write out your answer by giving the first six nonzero terms. You must write $f(x) =$ and then give the coefficients multiplied by the appropriate trig function for 6 nonzero terms where each coefficient is in simplest non-decimal mathematical form.

HW R1. Fourier Transform.

Find the Fourier transform for the function below and express your final answer in the simplest of forms.

