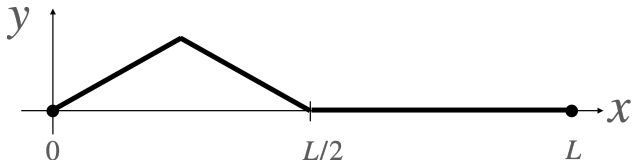
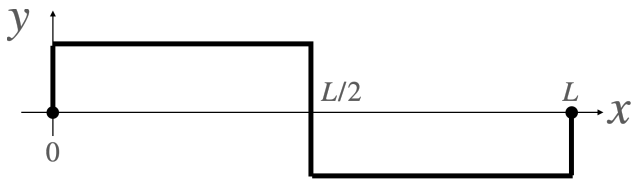
PHYS2063 Wave Physics Homework #10 Due Tuesday 27 Sep 2022

This homework assignment is due at the start of class on the date shown. You may submit a PDF of your solutions to the Canvas page for the course, or bring a paper copy to class.

Following the examples we did in class, and also the posted MATHEMATICA notebook, generate the Fourier Sine Series approximations for the two functions depicted here. The first is a simple triangle on the left half of the string, and flat on the right half:



The second example is a "square wave" of one period. Assume that the string is indeed fixed to the x-axis at both $x = 0$ and $x = L$:



Make plots, as we did in class, with different values for the maximum number Fourier sine terms, to get a sense of how many terms you need to get a good convergence to the right answer, in each case.