

3.) For the function discussed in class,

$$f(x) = x ; \quad -L < x < L$$

$$f(x + 2L) = f(x) ; \quad -\infty < x < \infty$$

Plot the original function for $-3L < x < 3L$, and then also plot the Fourier series derived in class for values of n up to $n = 1, 2, 3, 4, 5, 10, 20, 50$. There should be a total of 9 curves including the original.