

Name:

1. Either solve the following boundary value problem or else show that it has no solution.

$$y'' + y = 0$$

$$y(0) = 0$$

$$y'(\pi) = 1$$

2. Find the Fourier series for the function $f(x) = x$ defined on the interval $[-\pi, \pi)$. You may assume that f is periodic with period 2π .