

Math 2080: Differential Equations

Worksheet 6.6: Boundary value problems

NAME:

1. Solve the following boundary value problem:

$$y'' = \lambda y, \quad y'(0) = 0, \quad y(\pi) = 0.$$

Start by considering three cases separately: (i) $\lambda = 0$, (ii) $\lambda = \omega^2 > 0$, and (iii) $\lambda = -\omega^2 < 0$.