

Supplementary problems: 12.5 # 3, 4; p.687 # 1-8, 11, 13, 16, 18

Quiz: 12.1 - 12.3, 12.5

Compulsory problems:

These are the type of boundary conditions we didn't do in class.

Consider the Sturm-Liouville ODE:  $y'' + \lambda y = 0$  with the following boundary conditions

- (1) [10 pts.]  $y(0) = y(L) = 0$
- (2) [10 pts.]  $y'(0) = y'(2\pi) = 0$
- (3) [10 pts.]  $y(0) = y'(1) = 0$

Your homework raw score is:  $\frac{n}{2m} \cdot M + \left(1 - \frac{n}{2m}\right) \cdot N = N + \frac{n}{2m}(M - N)$ . For this homework,  $M = 30$ ,  $m = 12$ ,  $N$  is the number of compulsory problems you get correct, and  $n$  is the number of supplementary problems you complete. It should be noted that for the supplementary problems I will be looking for **full completion**, but I won't take off points for mistakes.