Math 1B Discussion Problems 23 Apr

1. Solve the differential equations.

   (a) $y'' - y' - 12y = 0$

   (b) $y'' + 9y = 0$

   (c) $y'' + 4y' + 9y = 0$

   (d) $y'' + 4y' + 4y = 0$

2. Solve the initial value problems.

   (a) $12y'' + 5y' - 2y = 0, y(0) = 1, y'(0) = -1$

   (b) $y'' - 4y' + 4y = 0, y(0) = 1, y'(0) = 0$

3. Solve the boundary value problems.

   (a) $y'' + 6y' = 0, y(0) = 1, y(1) = 0$

   (b) $y'' + 4y = 0, y(0) = 0, y(\pi) = 1$

4. * Solve the differential equations.

   (a) $y^{(4)} - y = 0$

   (b) $y^{(5)} - 3y^{(4)} + 3y^{(3)} - y'' = 0$