
Lab 6 - Nonhomogeneous Second Order Differential Equations

1. Write a trial solution for the given equations.

a. $y'' - 2y = 4x^2 - e^{2x}$

b. $y'' - 2y' + y = 4x + \sin 3x$

2. Solve the given differential equation using the method of undetermined coefficients.

$$y'' + y' - 2y = 2x$$

3. Solve the given differential equations using the method of undetermined coefficients.

$$y'' - 3y' - 4y = x + 2 \cos x$$