Problem 1

Solve the differential equation:

$$y'' + 3y' + 2y = 4$$

Problem 2

Solve the differential equation:

$$y'' + 3y' + 2y = 12e^x$$

Problem 3

Solve the differential equation:

$$y'' + 3y' + 2y = \sin(x)$$

Problem 4

Solve the differential equation:

$$y'' + 3y' + 2y = \cos(x) + x^2$$