

# Math 1B: Quiz 9 Problems

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April 30, 2019

Solve the following nonhomogeneous second order differential equations.

$$y'' - 2y' + 4y = \frac{x+2}{e^x}$$

$$y'' - 4y = \sin(x) + \cos(2x)$$

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

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

$$y'' - 2y' + 2y = e^x \cos(x) + 4$$

$$y'' + 2y' + y = -(2x+1)e^{-x}$$