

MATH 4305 - Ordinary Differential Equations II
Homework 0.4 - Non-homogeneous Linear Second Order Equations
Due - Friday, September 11, 2015

Solve each of these non-homogeneous linear second order differential equations.

1. $y'' - y' - 30y = 4x$

2. $y'' + y = e^{3x}$

3. $y'' - 6y' + 9y = \cos(x)$

4. $y'' - 9y = xe^x$

5. $y'' - 6y' + 9y = \frac{e^{3x}}{x^3}$

6. $x^2y'' + xy' - y = x^2 \ln(x)$