

Math 2552 Written HW Set 6

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Trench 5.4.7. Find a particular solution.

$$y'' - 4y' - 5y = -6xe^{-x}$$

Trench 5.7.7. Use variation of parameters to find a particular solution, given the solutions y_1, y_2 of the complementary equation.

$$x^2 y'' + xy' - y = 2x^2 + 2; \quad y_1 = x, \quad y_2 = \frac{1}{x}$$

Trench 10.7.1. Find a particular solution.

$$y' = \begin{bmatrix} -1 & -4 \\ -1 & -1 \end{bmatrix} y + \begin{bmatrix} 21e^{4t} \\ 8e^{-3t} \end{bmatrix}$$