

**Math 274 Homework**

Sections: 4.4,4.5

Due: 22 May 2018

Name: \_\_\_\_\_  
Scaled to 10 points.

1. Find the appropriate form using the Method of Undetermined Coefficients for a particular solution to the following. **Do not** solve for the unknown constants.

(a) 2       $y'' - y' - 6y = e^{3t} + 7t^2$

(b) 2       $y'' - 4y' + 4y = te^t + 3e^{4t}$

(c) 2       $y'' - 4y' + 4y = t^2e^{2t}$

(d) 2       $y'' - 4y' + 4y = te^{2t} \cos t$

2. Find a general solution for the following.

(a) 4       $y'' - 3y' + 2y = (12t + 8)e^{-t}$

(b)  $\boxed{4}$   $y'' - y' - 6y = (40t + 23)e^{3t} - 12t + 4$

(c)  $\boxed{4}$   $y'' - y' - 6y = 50t \cos t$  [WARNING: There be fractions here matey!]