

Math 3280 Worksheet 18:

Resonance in higher order linear homogeneous ODEs with constant coefficients.

Group members (1 to 3): \_\_\_\_\_

- (1) Find the general solution to the ODE  $y'' - y' = x + \sin(x)$ .

- (2) Write down the form of a particular solution  $y_p$  of the ODE

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

Do not determine the coefficients of the functions.