

1. Use reduction of order to find a 2<sup>nd</sup> solution  $y_2$  of the DE  $x^2y'' - 3xy' + 4y = 0$  given that  $y_1 = x^2$  is a solution.

2. Use the annihilator approach to find the form of a particular solution of  $y'' + 4y = \sin 2x + xe^x$