

1. Use reduction of order to find a  $2^{nd}$  solution  $y_2$  of the DE  $2x^2y'' + xy' - y = 0$  given that  $y_1 = x$  is a solution.

2. Use the annihilator approach to find the form of a particular solution of  $y'' + y = \cos x + 7 \sin x + x$