Today we will see how the Laplace transform can be used to solve second order ODEs

**To do List**

1. Watch the videos provided and take detailed notes.
2. Attempt the problem below to check your understanding.

**NOTE:** I will not collect the worksheet problems. These problems are meant to check your understanding and generate questions to ask me during office hours if you get stuck.

**Objectives**

By the end of this lecture you should be able to

1. Solve a first and second order ODE using the Laplace transform

**Problems**

1. Solve the initial value problem

\[ y'' + 6y' + 5y = 3e^{-2t}, \quad y(0) = 1, \ y'(0) = 1 \]

**Reading**

Section 6.2.