1. Consider the following differential equation:

\[ y'' + 2y' + 10y = 0 \]

(a) (5 points) Find the general solution of this differential equation.

(b) (1 point) How do you know this is the general solution?

2. (4 points) Write down the general solution of the equation

\[ y'' - 2y' + y = 0. \]

Show your work (as always!).