1. Find a general solution to
\[ y'' - 2y' + y = 0. \]

2. Solve the initial value problem
\[ y'' + 2y' + 17y = 0, \quad y(0) = 1, \quad y'(0) = -1. \]

3. Use the superposition principle and the method of undetermined coefficients to find a general solution to
\[ y'' - 4y' + 5y = 5x - e^{2x}. \]

4. Use variation of parameters to find the general solution of
\[ y'' + y = \frac{1}{\cos t}. \]