Q1) Find the solution of the following boundary value problem

\[ 4x^2 y'' + 4xy' + y = 0, \ y(1) = 1, \ y(e) = 0. \]  

(6 pts)

Q 2) Change the DE into DE with constant coefficients \[ x^2 y'' + 10xy' + 8y = x^2. \] (Do not solve) (4pts)