

3.2 Solutions of Linear Homogeneous ODEs and the Wronskian

Example: Find the longest interval in which the unique solution to $(t - 2)y'' + y' + (t - 2)\tan(t)y = 0$, $y(3) = 1$, $y'(3) = 2$ is certain to exist.

Show that the general solutions found for the ODE $y'' + y' - 6y = 0$ form a fundamental set of solutions.

Show that the general solutions found for the ODE $2y'' + 7y' + 6y = 0$ form a fundamental set of solutions.