

Non-Homogenous Linear Equations

1. For the differential equation $y'' + 2y' - 8y = e^{3x}$,
 - (a) Solve the complementary equation.
 - (b) Find a particular solution.
 - (c) Write down the general solution.
2. For the differential equation $y'' + 4y = \cos 2x$, what form should the particular solution take?