

Quiz 10

MA 262
Artur's Class

2014/11/06

Problem 1

Consider the inhomogeneous differential equation

$$y'' - 4y = x.$$

We will solve this using the method of annihilators.

- (a) Write down the associated homogeneous equation and solve it.
- (b) Write down an annihilator $P(D)$ for the inhomogeneous term.
- (c) What is the new differential equation?
- (d) Find a particular solution to the original equation.
- (e) Write down the general solution to the original equation.

Clearly mark and define anything you use. Be precise. There is no place in the world for ugly mathematics.