

MA 262 Section 596/597 Quiz 5

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Problem 1. Write your name, quiz number, and section number on a blank sheet of paper.

Problem 2. The general solution to the differential equation

$$y'' + 4y = 0$$

is of the form $y(x) = A \cos 2x + B \sin 2x$. If $y(0) = 5$ and $y'(0) = 14$, then find the particular solution corresponding to these initial conditions.

Problem 3. Let

$$\begin{aligned} 6x + 3y &= 0 \\ 12x + ky &= 0. \end{aligned}$$

What values of k does the system have a unique solution?