$\begin{array}{l} \mbox{Math 54 Quiz 19} \\ \mbox{GSI: Lionel Levine} \\ \mbox{4/25/05} \end{array}$

1. Find the general solution to the boundary value problem

$$y'' + 9y = \cos 2x, \qquad y(0) = 0, \quad y(\pi) = \frac{2}{5}$$

or else show that it has no solution.