

## Problem 4

In each of Problems 1 through 13:

- (a) Find the solution of the given initial value problem.
- (b) Draw the graphs of the solution and of the forcing function; explain how they are related.

$$y'' + 4y = \sin t + u_\pi(t) \sin(t - \pi); \quad y(0) = 0, \quad y'(0) = 0$$