

Problem 2

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.

$$y'' + 2y' + 2y = h(t); \quad y(0) = 0, \quad y'(0) = 1; \quad h(t) = \begin{cases} 1, & \pi \leq t < 2\pi \\ 0, & 0 \leq t < \pi \quad \text{and} \quad t \geq 2\pi \end{cases}$$