EECS20n, Quiz 4, 11/15/01

The quiz will take 15 minutes. Write your reponse on the sheet. Use the back if you need more space.

Please print your name here:

Last Name ─────────────── First ─────────────── Lab ───────────────

Consider the continuous-time signal x where

$$\forall\, t \in Reals, \quad x(t) = 1 + \cos(\pi t) + \cos(2\pi t).$$

Suppose that x is the input to an LTI system with frequency response given by

$$\forall\, \omega \in Reals, \quad H(\omega) = \begin{cases} e^{i\omega} & \text{if } |\omega| < 4 \text{ radians/second} \\ 0 & \text{otherwise} \end{cases}$$

Find the output y of the system.