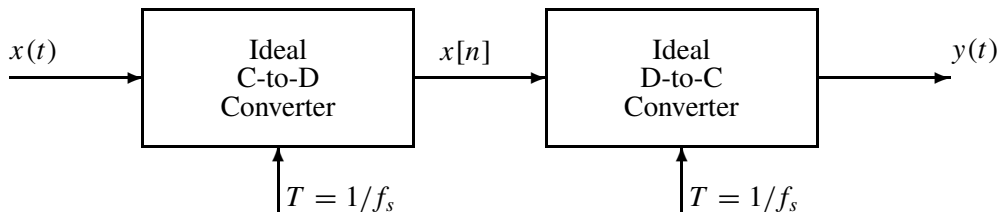


PROBLEM:

Consider the following system.



Suppose that the output of the D-to-C converter is

$$y(t) = 5 \cos(500\pi t + \pi/4)$$

and that the sampling rate is $f_s = 1/T = 2000$ samples/second. Determine two *different* continuous-time signals $x(t) = x_1(t)$ and $x(t) = x_2(t)$ that could have been inputs to the above system. Give equations for both inputs.