CT LTI Sys.

The test signals are

Recall

Note Title 9/15/2014

Again we use $h(t)$ to denote $y_0(t)$, the output when the input is $\delta(t)$.

* $h(t)$ is thus termed the _____

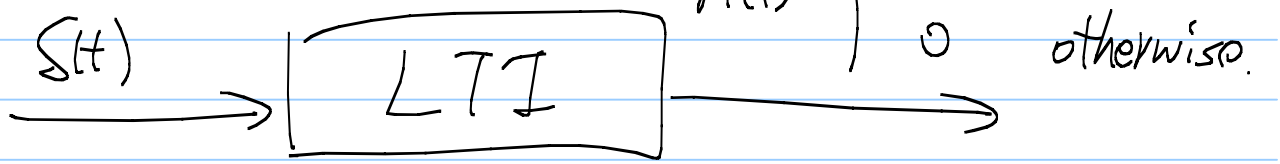
_____.

* Q: How about $y_{0.7}(t)$?

$x_{0.7}(t) = \delta(t-0.7)$ → [LTI] → $y_{0.7}(t)$

Theorem: For a CT LTI sys. with impulse response $h(t)$, the input/output relationship is _____

Ex: For a given LTI sys, and I know



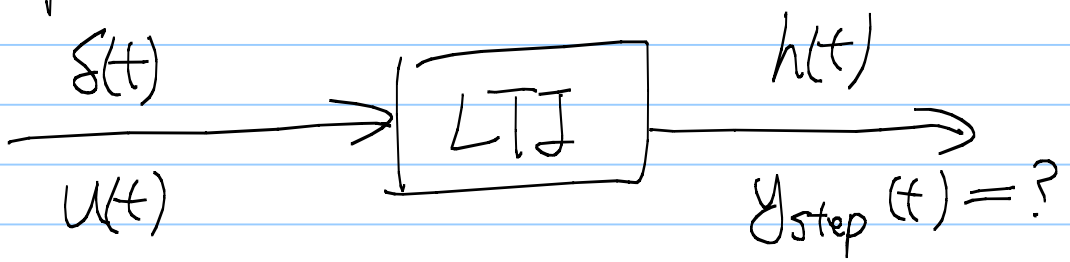
Q: What is the output $y(t)$ when the input is $x(t) = \begin{cases} 1 & \text{if } -3 \le t < 0 \\ 0 & \text{otherwise} \end{cases}$?

Ans:

p.059

* Another example: Compute the step response.

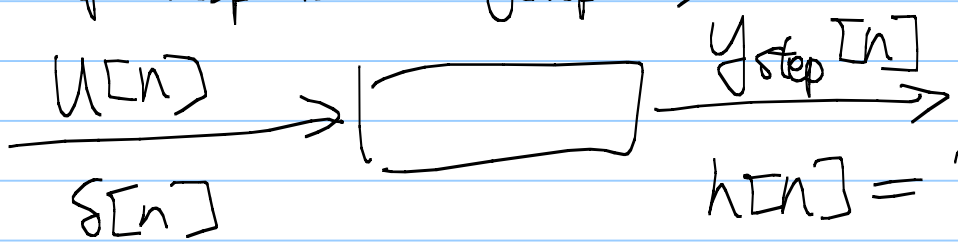
Q: For a given LTI system with impulse response $h(t)$



Find out the step response $y_{step}(t)$.

Ans:

Q: For a given LTI system with step response $y_{step}[n]$



Find out the impulse response.

Ans: