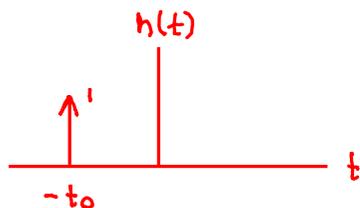


Example 4.11. Consider the LTI system with impulse response h given by

$$h(t) = \delta(t + t_0),$$

where t_0 is a $t_0 > 0$ strictly positive real constant. Determine whether this system is causal.

Solution. From the definition of δ , we can easily deduce that $h(t) = 0$ except at $t = -t_0$. Since $-t_0 < 0$, the system is not causal. ■



causal : $h(t) = 0$ for all $t < 0$