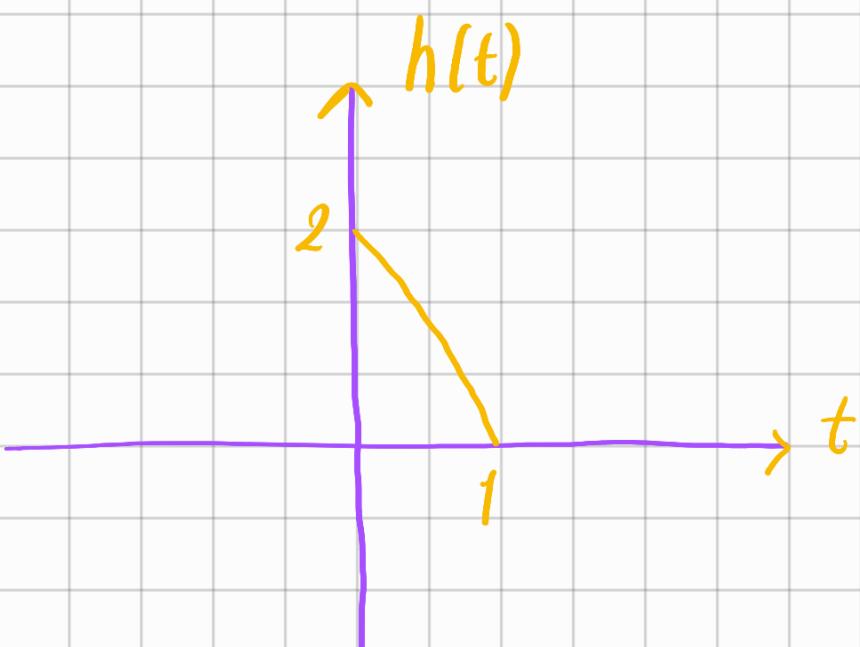
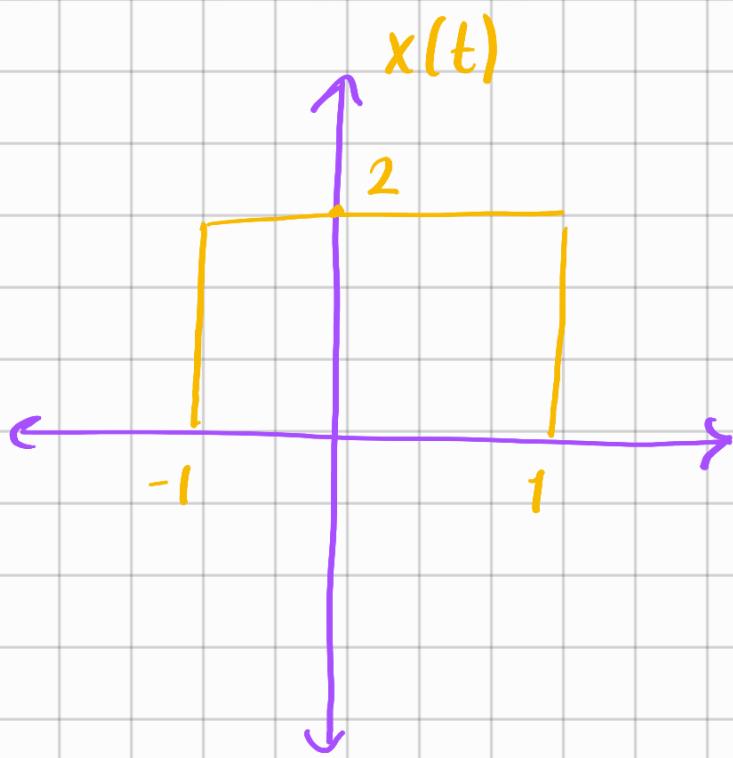


ÖR

girdi  $x(t)$  ye sistem impuls fonksiyonu

$h(t)$  aşağıdaki gibi tanımlanıysa

sistem çıkışı  $y(t)$ 'yi hesaplayın



↳ Bu soruda 5 tone olur 2 tone kırımlı çalışma  
2 tone hiç çalışmıyor 1 tone tom çalışma

$$x(t) = \begin{cases} 2, & -1 < t < 1 \\ 0, & \text{otherwise} \end{cases}$$

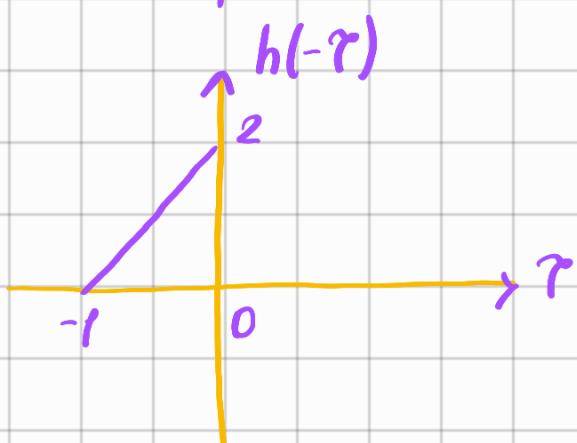
$$h(t) = \begin{cases} -2t+2, & 0 \leq t \leq 1 \\ 0, & \text{otherwise} \end{cases}$$

Kontrolüsyon yapmaya başlıyoruz

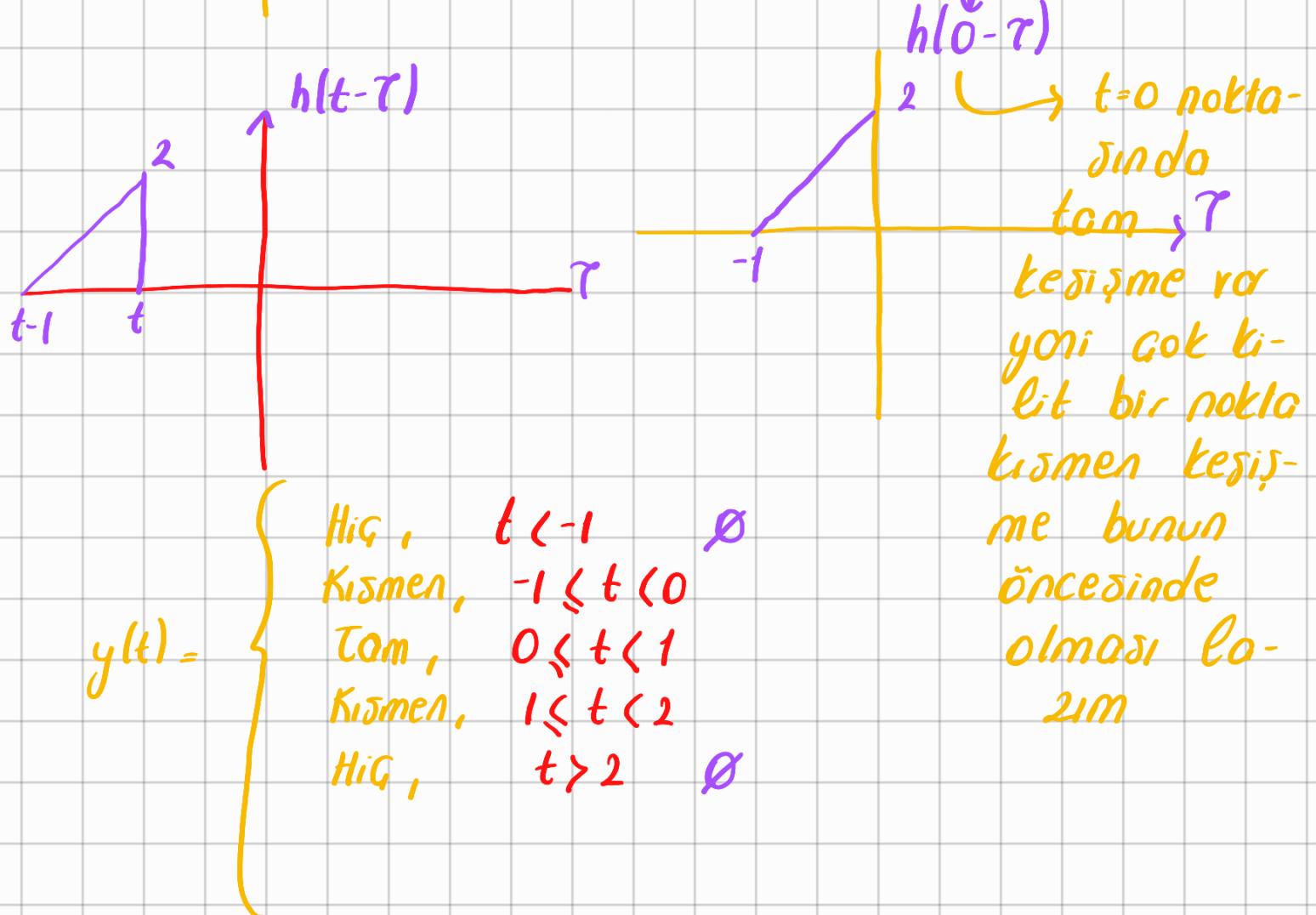
①  $x(\tau), h(\tau)$



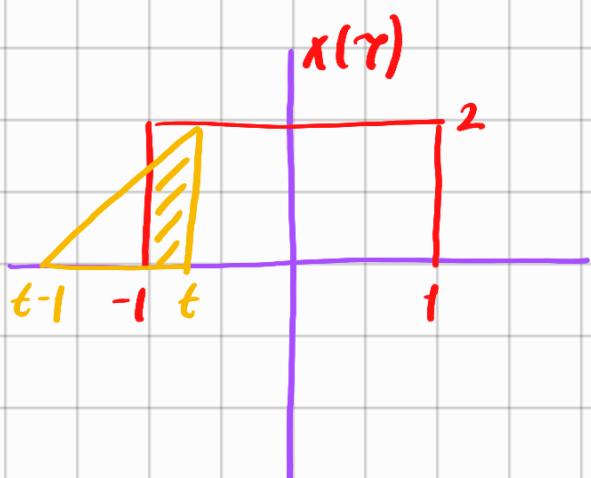
$$\int_{-\infty}^{\infty} x(\tau) h(t-\tau) d\tau$$



)  $t=0$



$$-1 < t < 0 \quad h(t-\tau)$$



$$h(t) = -2t + 2$$

$$h(t-\tau) = -2(t-\tau) + 2$$

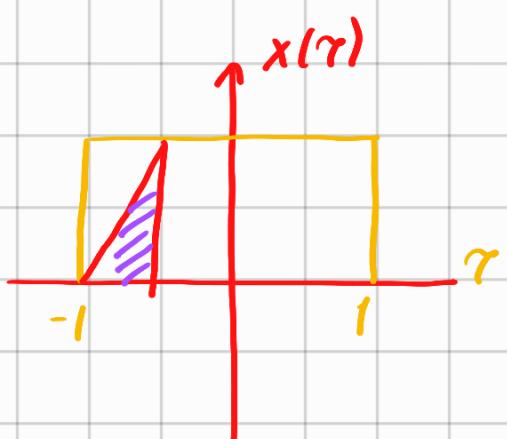
$$2(1-t-\tau)$$

$$y(t) = \int_{-1}^t x(\tau) \cdot h(t-\tau) d\tau$$

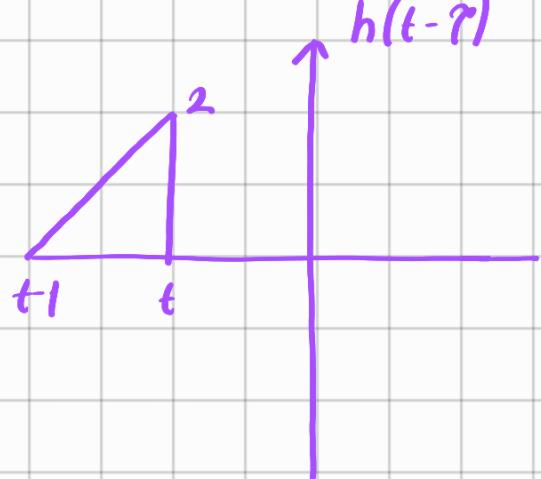
$$= \int_{-1}^t 2 \cdot 2(1-t-\tau) d\tau$$

$$\int_{-1}^t (1-t-\tau) d\tau = \boxed{2(1-t)^2}$$

$$\begin{cases} -1 < t < 0 \\ 0 \end{cases}$$



$$\begin{cases} 0 < t < 1 \\ 2 \end{cases}$$



$g(t)$	$t < -1$	$-1 < t < 0$	$0 < t < 1$	$1 < t < 2$	$2 < t$
$y(t)$	0	$2(1-t^2)$	2	$2(t-2)^2$	0

