

Discussion problem assignment:

2. Sketch the following signal and find its time derivative:

$$x(t) = u(t) - u(t - 2)$$

$$y(t) = tu(t) - (t - 1)u(t - 1)$$

问题:

第一题:

Let $x(t) = tu(t) - 2(t - 1)u(t - 1) + (t - 2)u(t - 2)$, sketch $x(t)$ and find its time derivative.

第二题:

Compute the following integral $\int_0^1 \delta(t - \tau) d\tau$ and confirm that the result is a rectangular pulse $x(t)$