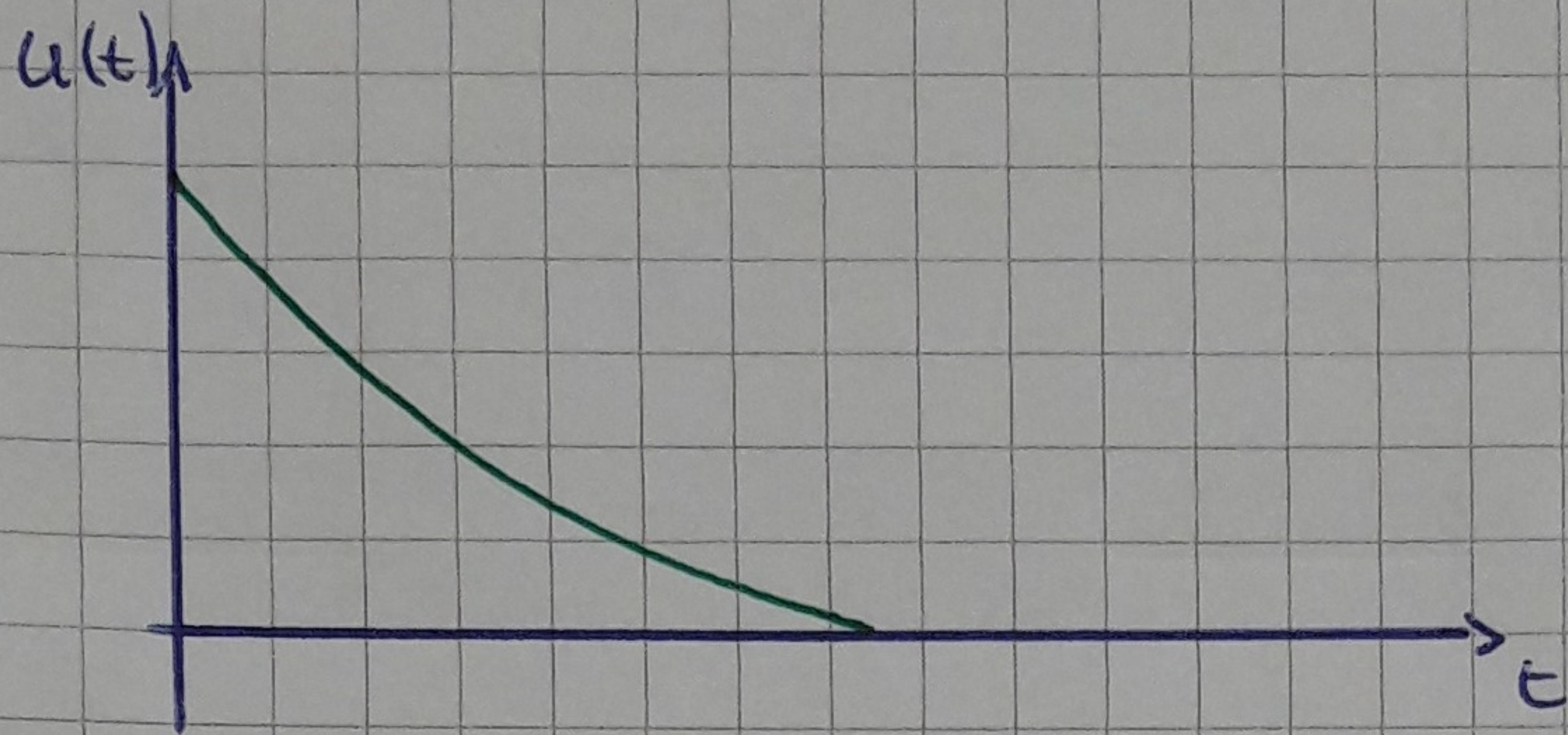


• strictly monotonically decreasing function $u(t)$

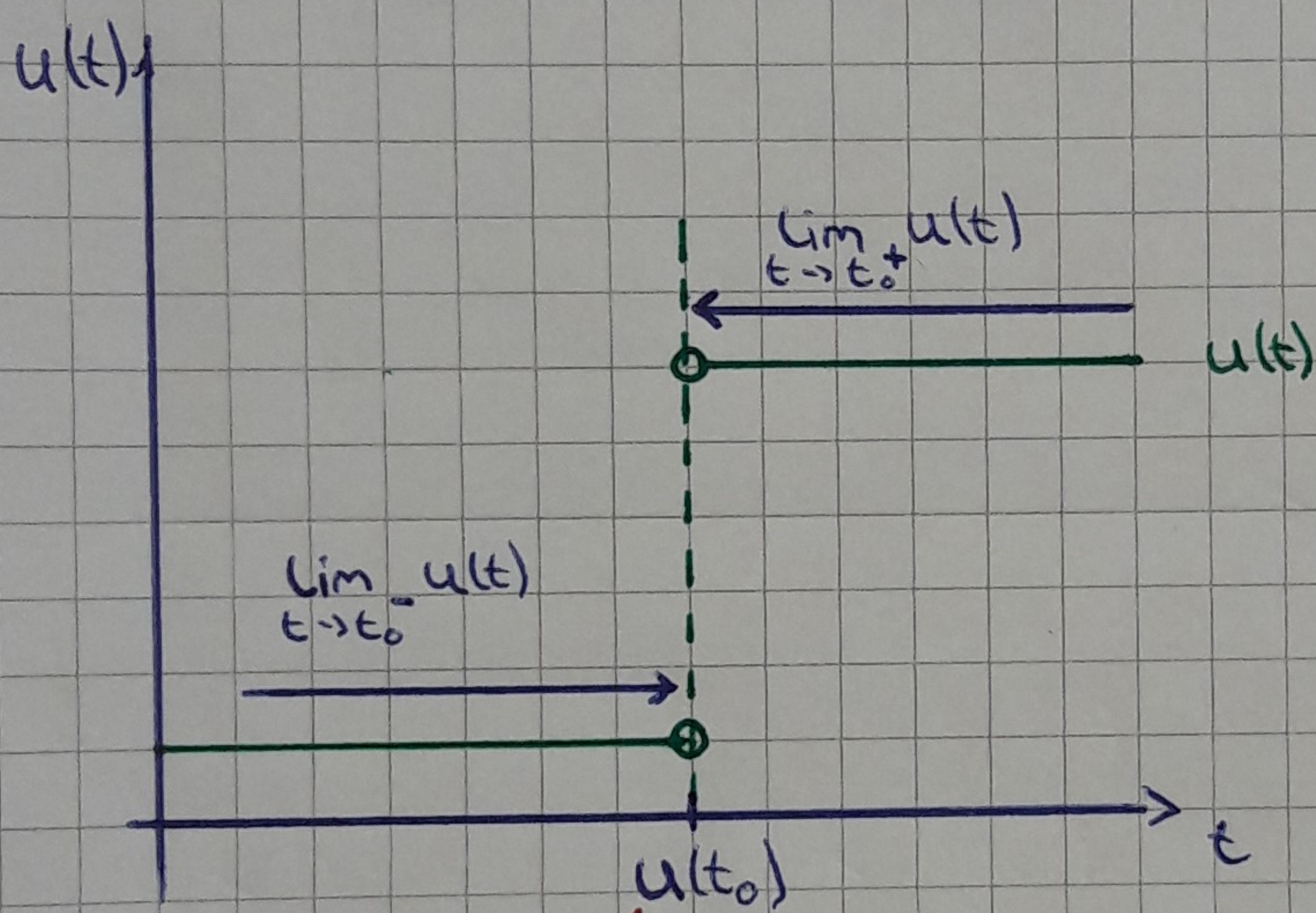
$$\rightarrow t_1 > t_2 \Rightarrow u(t_1) > u(t_2) \quad | \quad \forall t_1, t_2; t_1, t_2 \in \mathbb{R}$$

$$\rightarrow u'(t) < 0$$



3.2 Discontinuities

It's important, that the right- and left-sided limit values exist



↳ Only one function value at this point t_0 , but the exact position is unknown.

$$u(t_0^-) = \lim_{t \rightarrow t_0^-} u(t)$$

$$u(t_0^+) = \lim_{t \rightarrow t_0^+} u(t)$$

3.3

$u(t)$ must be absolutely integrabel over a period.

$$\rightarrow \int_{-\infty}^{\infty} |u(t)| dt < \infty$$