$$f(t)$$

$$t \cdot u(t)$$

$$\mathcal{L}\left\{t \cdot u(t)\right\} = \int_{0}^{\infty} e^{-st} t \, dt = \frac{1}{s^2}$$

$$t \cdot u(t) \Leftrightarrow \frac{1}{s^2}$$