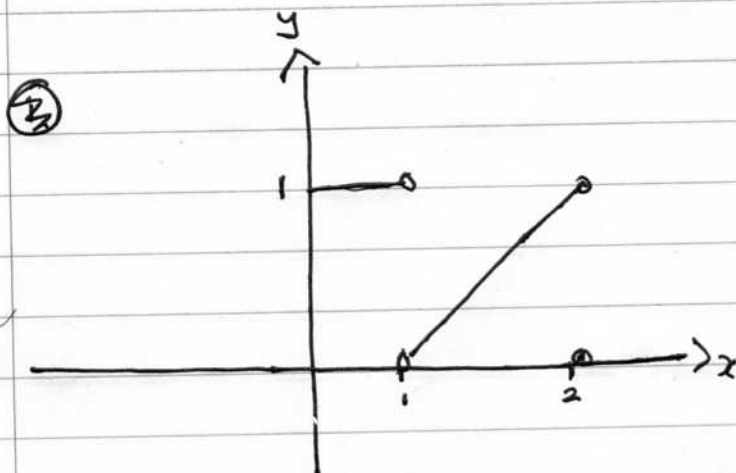


$$(b) f(t) = \begin{cases} 1 & 0 \leq t \leq 1 \\ t-2 & 1 \leq t \leq 2 \\ 0 & t > 2 \end{cases}$$



$$f(t) = u(t-1) - u(t-2)(t-2) - u(t-\frac{1}{2}) \times (t-2)$$

$$f(t) = u(t-1) - u(t-2)(t-2) + u(t-1)(t-2+1)$$

$$f(t) = u(t-1) - u(t-2)(t-2) + u(t-1)(t-1) + u(t-1)$$

$$f(t) \sim \mathcal{L}\{f(t)\} = \frac{e^{-s}}{s} - \frac{e^{-2s}}{s^2} + \frac{e^{-s}}{s^2} + \frac{e^{-s}}{s}$$