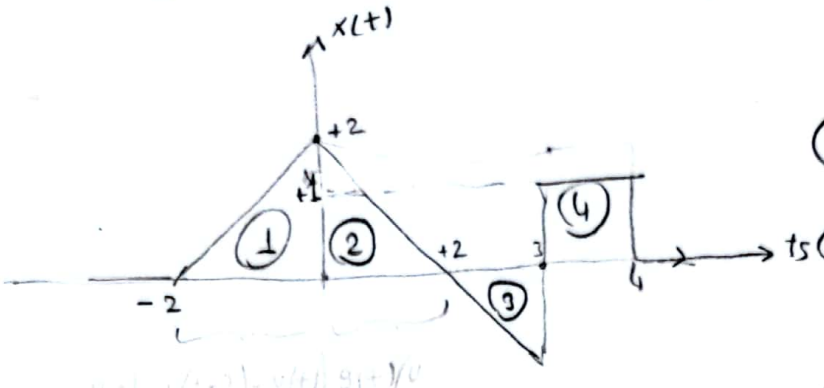
Seyfullah Kutluk 150180073



① → $g_1(t)\,(u(t+2)-u(t))$

② → $g_2(t)\,(u(t)-u(t-2))$

③ → $g_3(t)\,(u(t-2)-u(t-3))$ same function as ②

④ → $g_4(t)\,(u(t-3)-u(t-4))$

$g_1(t) = \longrightarrow y = ax+b \longrightarrow (t+2)(u(t+2)-u(t))$

$y = x+2$

$g_2(t) = \longrightarrow y = ax+b$ $g_3(t)$ is same function as $g_2(t)$

$y = -x+2 \longrightarrow (-t+2)(u(t)-u(t-2))$

$g_3(t) = \longrightarrow y = ax+b \longrightarrow (-t+2)(u(t-2)-u(t-3))$

$y = -x+2$

$g_4(t) = \longrightarrow y = ax+b \longrightarrow (1)(u(t-3)-u(t-4))$

$y = 1$

+

$$x(t) = \overbrace{(t+2)(u(t+2)-u(t))}^{1} + \overbrace{(-t+2)(u(t)-u(t-2))}^{2} + \overbrace{(-t+2)(u(t-2)-u(t-3))}^{3} + \overbrace{(u(t-3)-u(t-4))}^{4}$$

$$x(t) = (t+2)(u(t+2) - 2t\,u(t) - (t-2)(u(t-3)) + u(t-3) - u(t-4)$$

$$\boxed{x(t) = (t+2)\cdot u(t+2) - 2t\cdot u(t) - (t-2)u(t-3) + u(t-3) - u(t-4)}$$

Answer