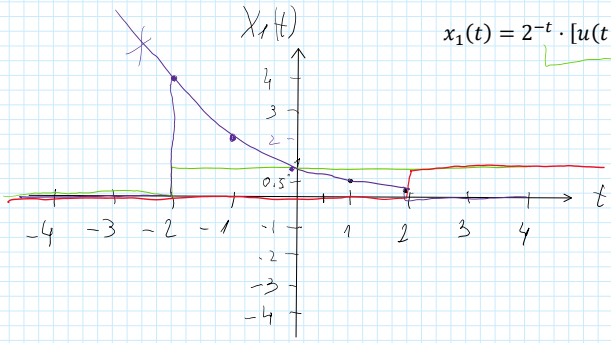
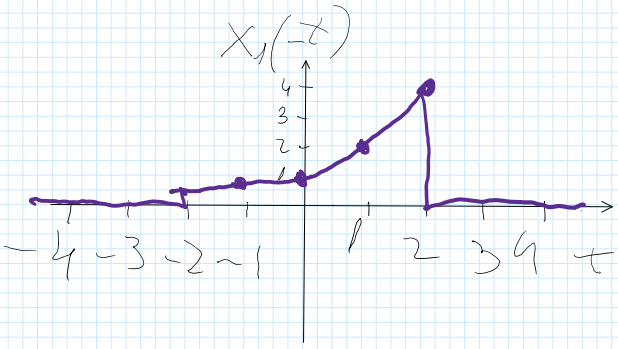
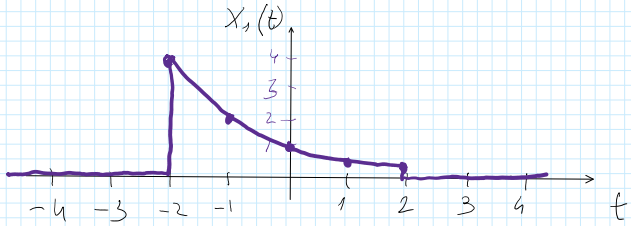
(1 (1c

$$x_1(t) = 2^{-t} \cdot [u(t+2) - u(t-2)]$$

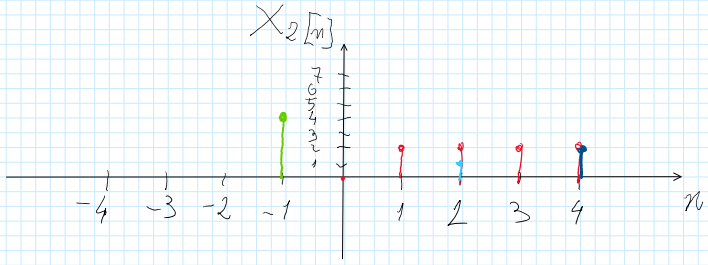


$2^0 = 1$
$2^1 = 2$
$2^2 = 4$
$2^{-1} = 0.5$
$2^{-2} = \frac{1}{4} = 0.25$

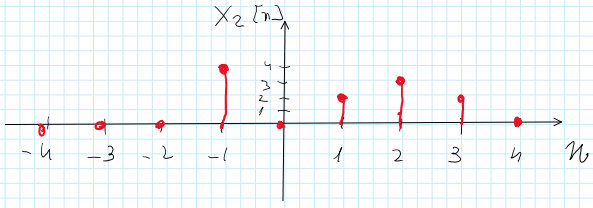




(2



$$x_2[n] = 4 \cdot \delta[n+1] + 2 \cdot u[n-1] + \delta[n-2] - 2 \cdot U[n-4]$$



$$y_{[n]} = \frac{x_2[n-1] + x_2[n]}{2}$$

$y[-4] = \frac{0+0}{2} = 0$
$y[-3] = \frac{0+0}{2} = 0$
$y[-2] = \frac{0+0}{2} = 0$
$y[-1] = \frac{0+4}{2} = 2$
$y[0] = \frac{4+0}{2} = 2$
$y[1] = \frac{0+2}{2} = 1$
$y[2] = \frac{2+3}{2} = 2.5$
$y[3] = \frac{3+2}{2} = 2.5$
$y[4] = \frac{2+0}{2} = 1$