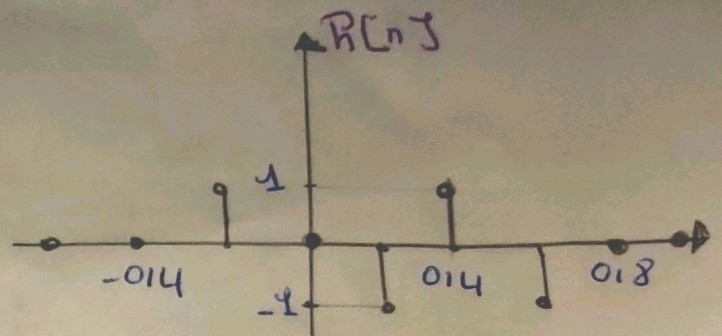
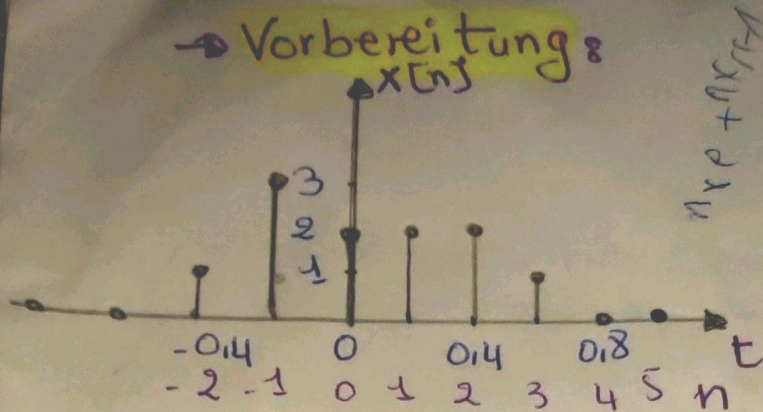


→ Vorbereitung:



$$T = 0.2$$

$$x[nT] = \{1; 3; 2; 2; 1\}$$

$$n_{xe} = -2$$

$$n_{xr} = 3$$

$$n_{xe} = 6$$

$$R[nT] = \{1, 0, -1, 1, -1\}$$

$$n_{Re} = -1$$

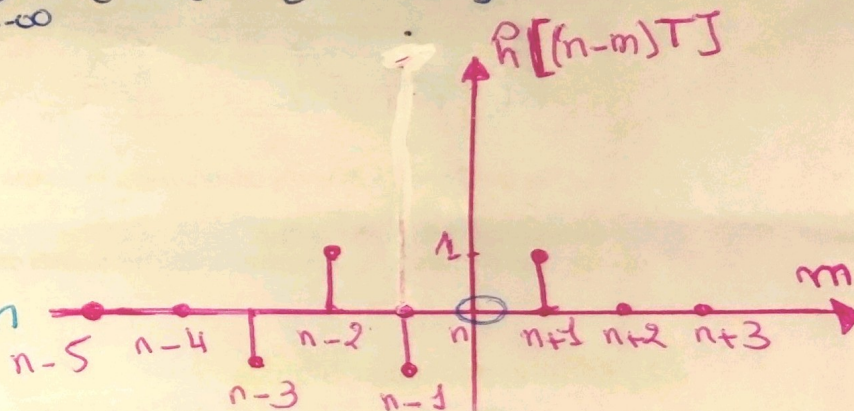
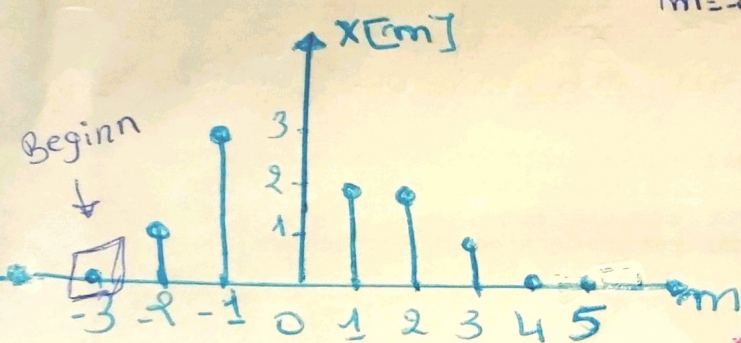
$$n_{Rr} = 3$$

$$n_{Re} = 5$$

$$n_{yr} = 6$$

$$n_{ye} = 10$$

$$y[n] = x[n] * R[n] = \sum_{m=-\infty}^{\infty} x[mT] \cdot R[(n-m)T]$$



$$y[-3T] = 0 \cdot 0 + 1 \cdot 1 + 3 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 1 \cdot 0 = 1$$

$$y[-2T] = 0 \cdot -1 + 1 \cdot 0 + 3 \cdot 1 + 2 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 1 \cdot 0 = 3$$

$$y[-1T] = 0 \cdot 1 + 1 \cdot 1 + 3 \cdot 0 + 2 \cdot 1 + 2 \cdot 0 + 2 \cdot 0 + 1 \cdot 0 = 1$$

$$y[0T] = 0 \cdot -1 + 1 \cdot 1 + 3 \cdot -1 + 2 \cdot 0 + 2 \cdot 1 + 2 \cdot 0 + 1 \cdot 0 = 0$$

$$y[1T] = 0 \cdot 0 + 1 \cdot 1 + 3 \cdot 1 + 2 \cdot -1 + 2 \cdot 0 + 2 \cdot 1 + 1 \cdot 0 = 2$$

$$y[2T] = 0 \cdot 0 + 1 \cdot 0 + 3 \cdot -1 + 2 \cdot 1 + 2 \cdot -1 + 2 \cdot 0 + 1 \cdot 1 = -2$$

$$y[3T] = 0 \cdot 0 + 1 \cdot 0 + 3 \cdot 0 + 2 \cdot -1 + 2 \cdot 1 + 2 \cdot -1 + 1 \cdot 0 = -2$$

$$y[4T] = 0 \cdot 0 + 1 \cdot 0 + 3 \cdot 0 + 2 \cdot 0 + 2 \cdot -1 + 2 \cdot 1 + 1 \cdot -1 = -1$$

$$y[5T] = 0 \cdot 0 + 1 \cdot 0 + 3 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 2 \cdot -1 + 1 \cdot -1 = -1$$

$$y[6T] = 0 \cdot 0 + 1 \cdot 0 + 3 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 1 \cdot -1 = -1$$

$$y[7T] = 0 \cdot 0 + 1 \cdot 0 + 3 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 1 \cdot -1 = -1$$

$$y[8T] = 0 \cdot 0 + 1 \cdot 0 + 3 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 1 \cdot -1 = -1$$

$$y[9T] = 0 \cdot 0 + 1 \cdot 0 + 3 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 2 \cdot 0 + 1 \cdot -1 = -1$$

$$y[nT] = \{1; 3; 1; 0; 2; -2; -2; -1; -1; -1\}$$