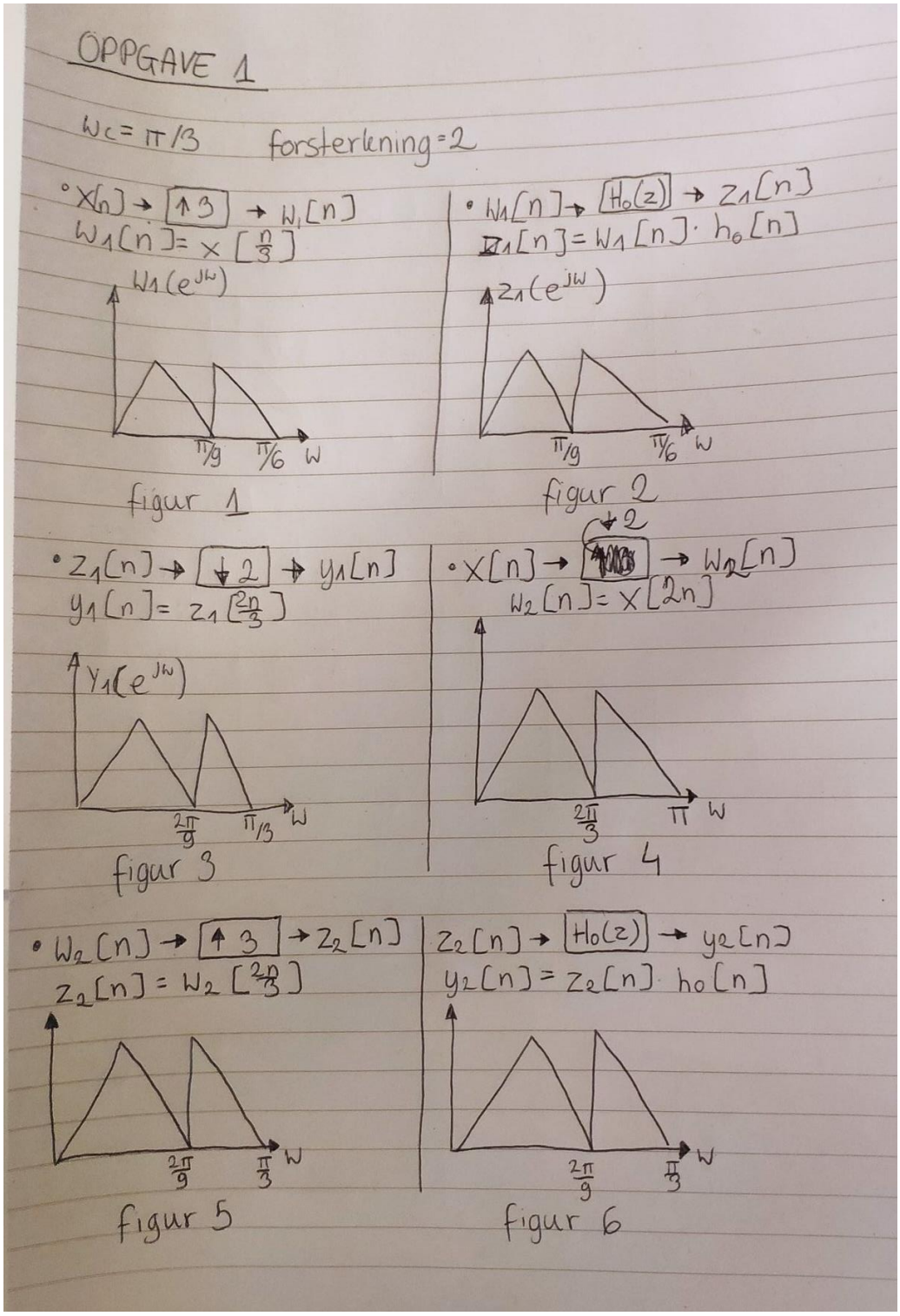
Oppgave 1



Oppgave 2

a) Vi har

$$h[n] = \frac{1}{K}\sum_{k=0}^{K-1} \delta[\mathrm{n} - \mathrm{k}]$$

Altså

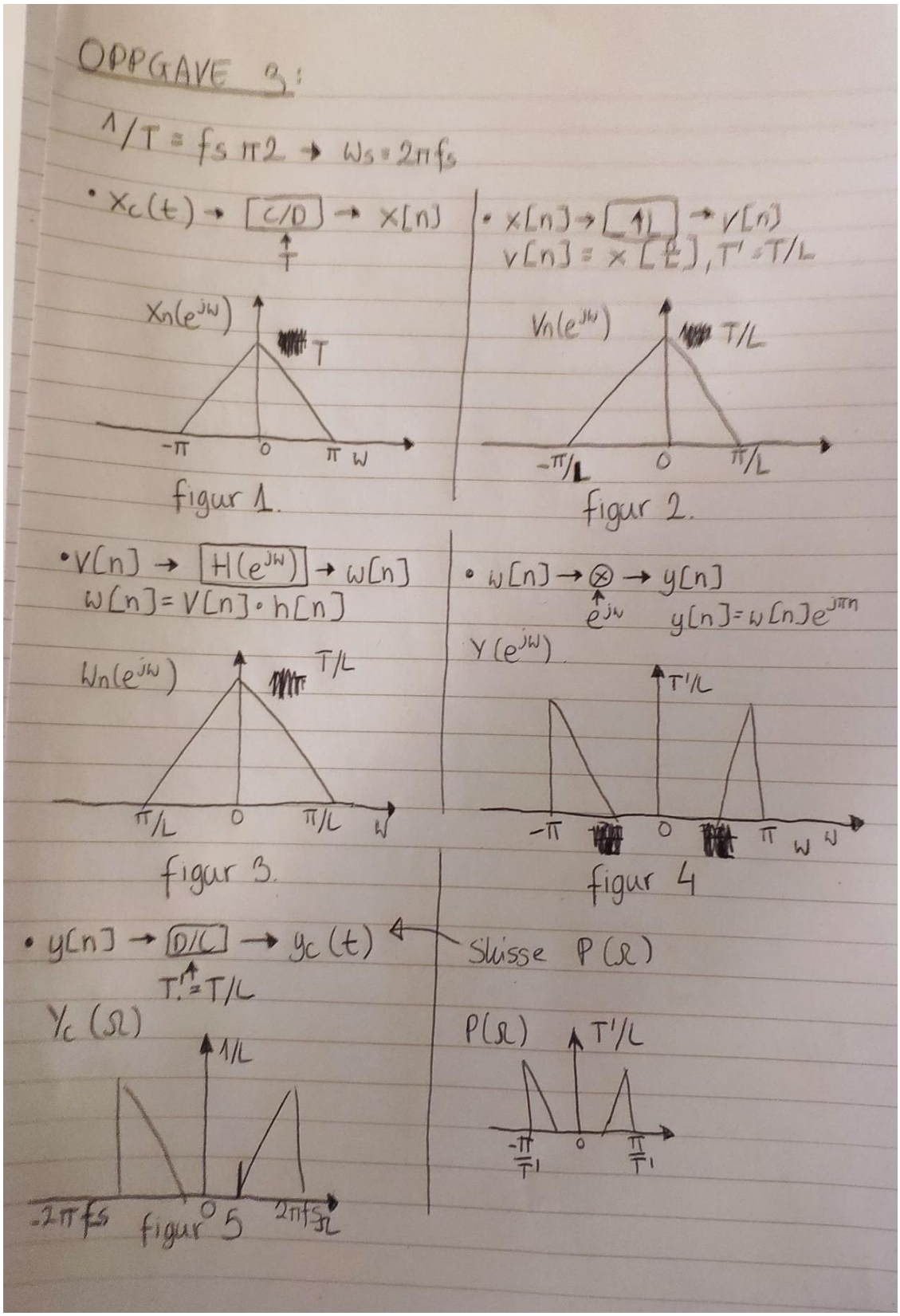
$$H(e^{j\omega}) = \frac{1}{K}\sum_{k=0}^{K-1} e^{-kj\omega}$$

Vi bruker geometriske rekker og får

$$H(e^{j\omega}) = \frac{1}{K}\frac{1-e^{-kj\omega}}{1-e^{-j\omega}}$$

$$H(\Omega) = \frac{1}{K}\frac{1-\Omega^{-k}}{1-\Omega^{-1}}$$

Oppgave 3



Oppgave 4-2

Svar: Alternativ b)

Oppgave 4-5

Svar: Alternativ b)