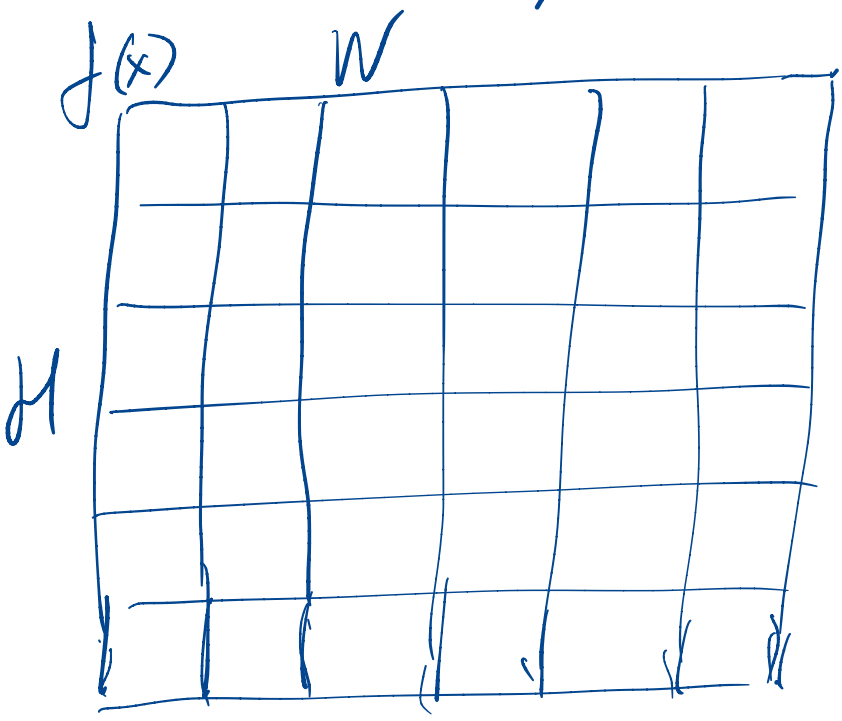
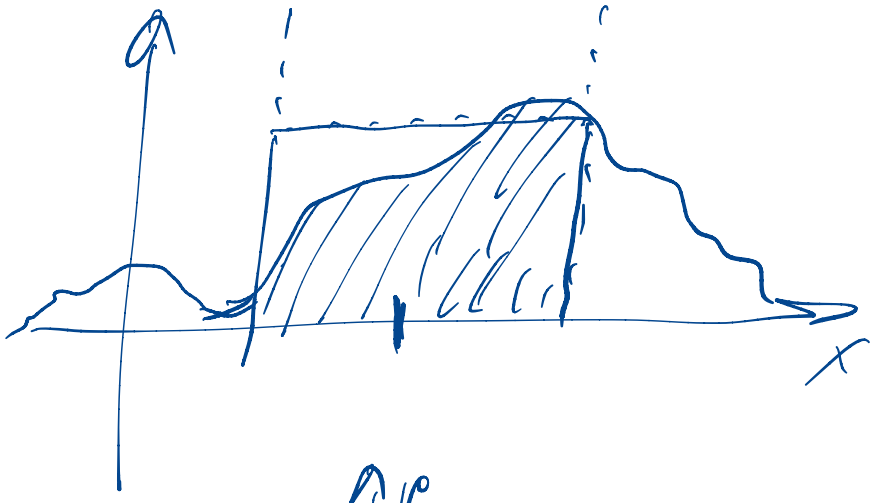
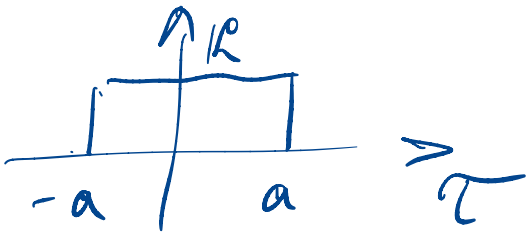
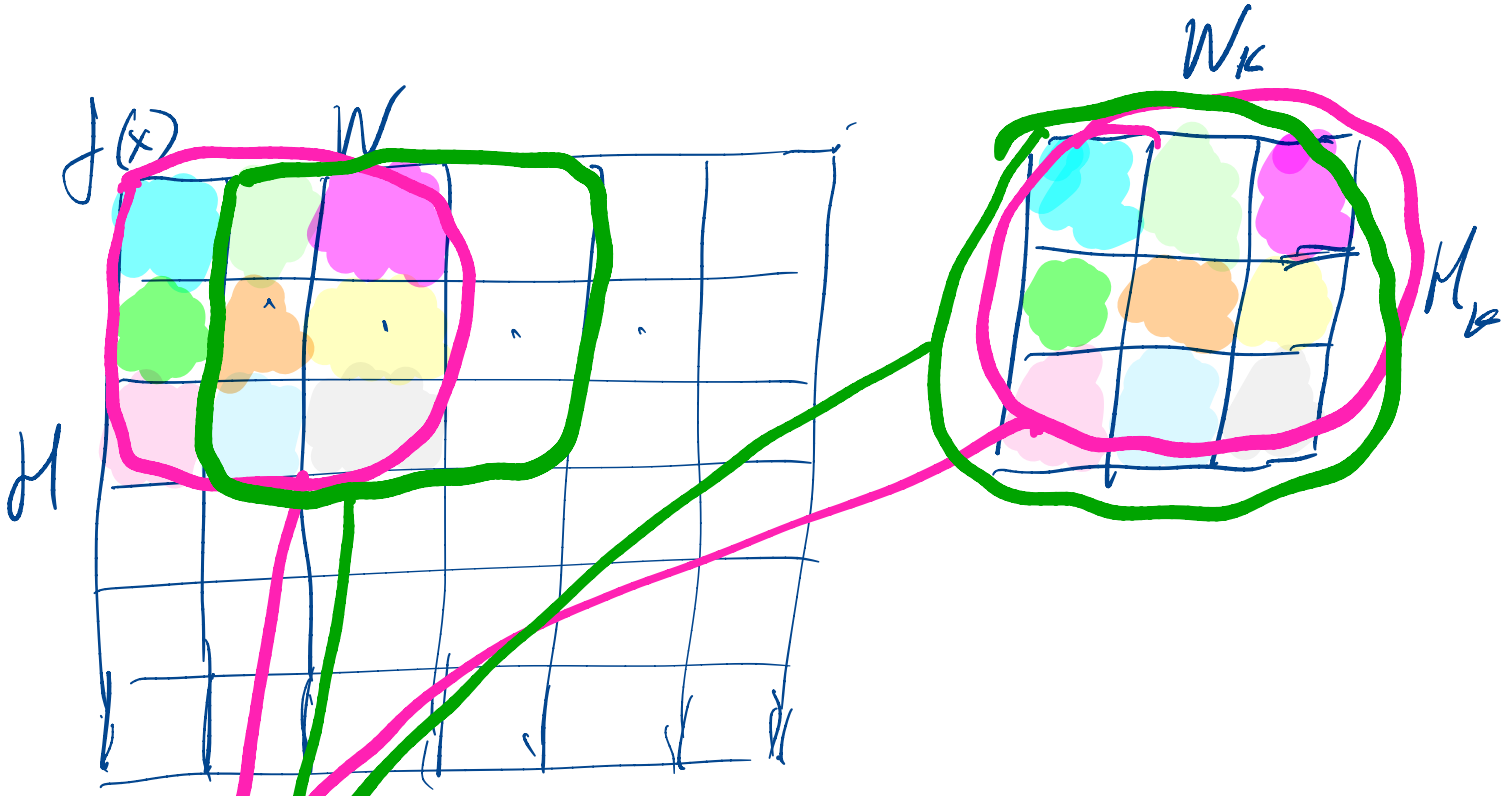
Свёртка ИНС

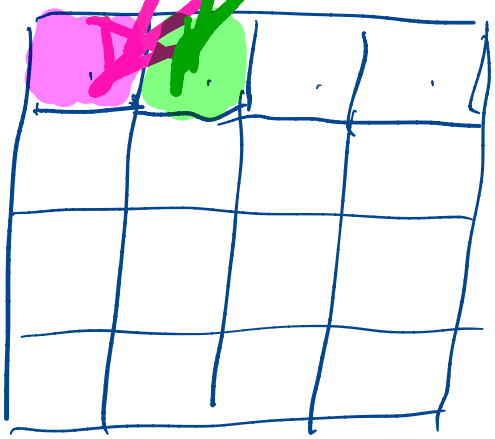


$$F(x) = \int_{-\infty}^{+\infty} f(x)\, k(x-\tau)\, d\tau$$





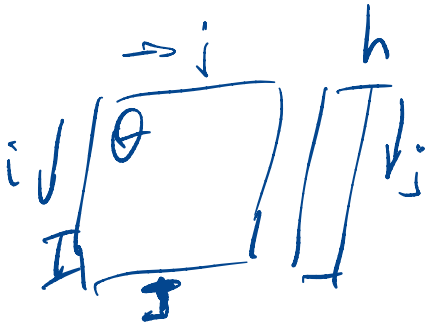




$$F_{ij} = \sum_{k=0}^{W_K-1} \sum_{l=0}^{H_K-1} f_{i+k,j+l} K_{kl}$$

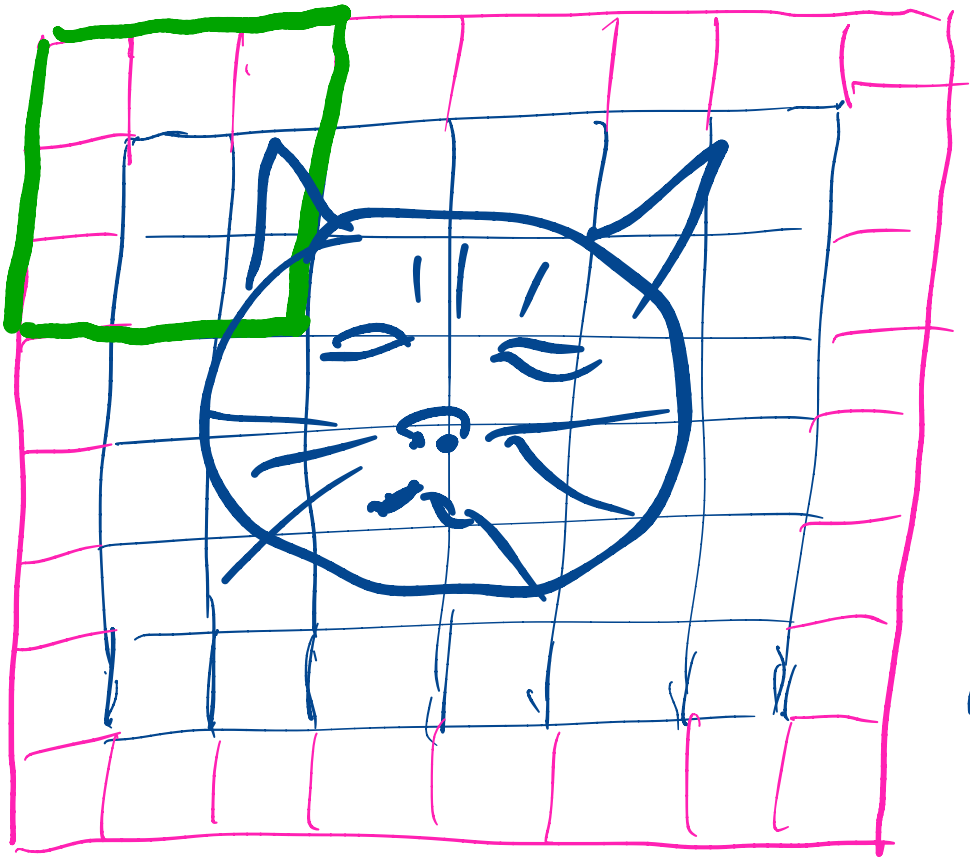
$$W' = W - W_K + 1$$

$$H' = H - H_K + 1$$

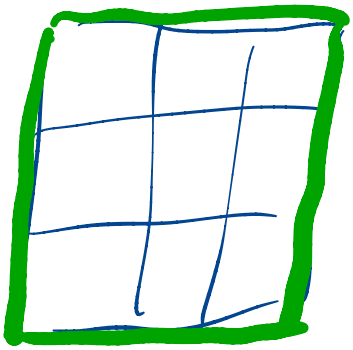


Padding

$f(x)$



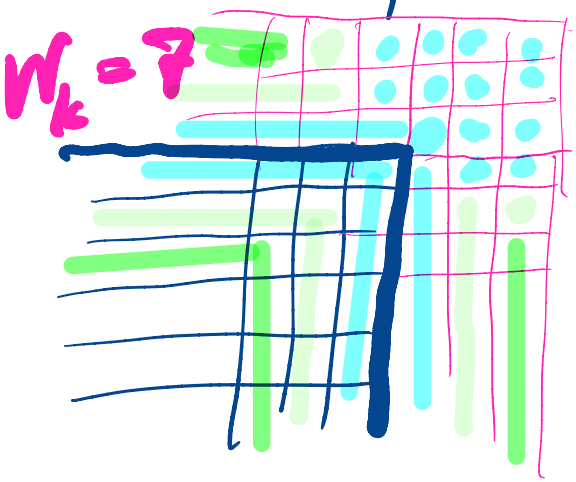
K



$W_k = 3$

$H_k = 3$

1. zero-padding
2. const-padding
3. mirror-padding



$W' = W_p - W_k + 1$

$W \quad W + pad$

$pad = W' - W + W_k - 1$

$\quad\quad 0 \quad\quad 0$

$$pad = \frac{W_k - 1}{2}$$

Padding

④ Cycle-padding