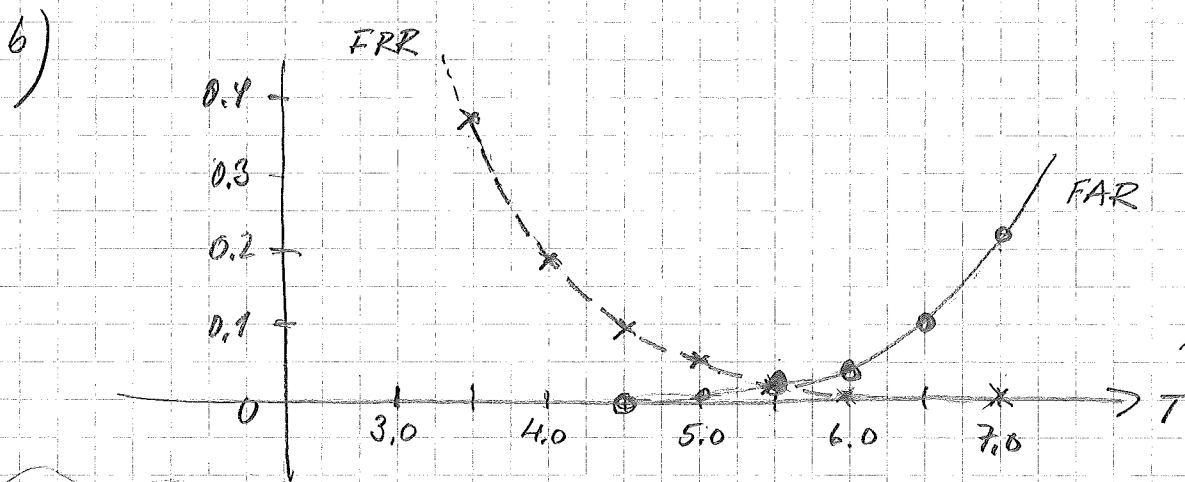


5

a)

	$d \geq T$ Antal FR-fel	FRR	$d \leq T$ Antal FA-fel	FAR
7,0			214	$214/1000 = 0,214$
6,5	0	$0/399 = 0$	103	$103/1000 = 0,103$
6,0	4	$4/399 = 0,01$	40	$40/1000 = 0,040$
5,5	7	$7/399 = 0,018$	24	$24/1000 = 0,024$
5,0	21	$21/399 = 0,053$	4	$4/1000 = 0,004$
4,5	38	$38/399 = 0,095$	0	$0/1000 = 0$
4,0	77	$77/399 = 0,193$	0	
3,5	147	$147/399 = 0,368$	0	
3,0				



c) $FRR \leq 1\% = 0,01 \Rightarrow T \approx 6$ (se tabell)
 Antal FR $\leq 0,01 \cdot 399 \approx 4$ st

Bestämsregel: $d \leq 6$ \Rightarrow FAR = 4%
 accept. Antal FA ≈ 40 (från histogram)
 FAR = $40/1000$

d) $FAR \leq 0,31$ \Rightarrow Antal FA
 $0,003 \cdot 1000 \approx 3 \Rightarrow T \approx 4,9$

Bestämsregel: $d \leq 4,9 \Rightarrow FRR = 5,5\%$
 Antal FR ≈ 22 st (från histogram)
 FRR = $22/399$

⑥ a) Längd på listan $K=5$

$\Rightarrow 86 + 87 + 73 + 50 + 39 = 335$
 histogram

Således 335 rätt id finns med i listan av totalt 420 SE

\Rightarrow sannolikhet = $\frac{335}{420} \approx 80\% (0,7976)$

b) Öka sannolikheten
 \Rightarrow gör listan längre

(Ex) välj $K=7$

\Rightarrow ytterliggare $32+14=46$ rätt id
 finns med i listan

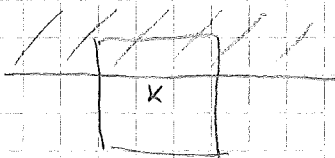
\Rightarrow sannolikhet = $\frac{(335+46)}{420} = 91\% (0,9071)$

⑦

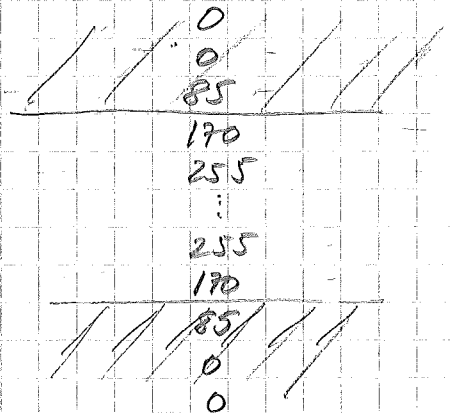
Nytt pixelvärde = $w_0 \cdot f_0 + w_1 \cdot f_1 + \dots + w_8 \cdot f_8 = \sum_{i=0}^8 w_i \cdot f_i$



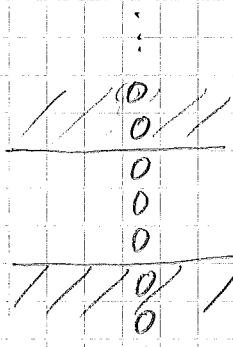
$255 \cdot 3/9 = 85$



$255 \cdot 6/9 = 170$



b)

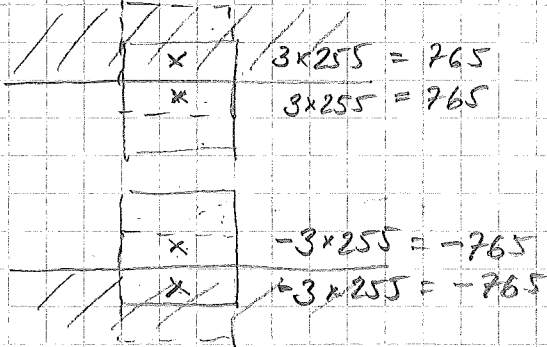


"null-bild"

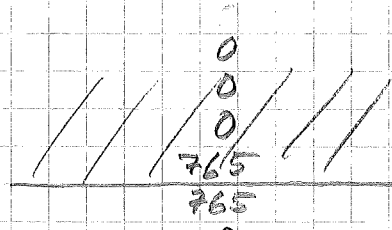
2

c)

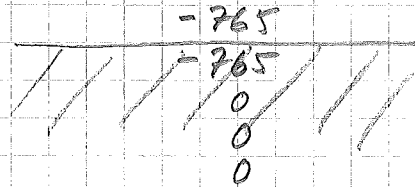
-1	-1	-1
0	0	0
1	1	1



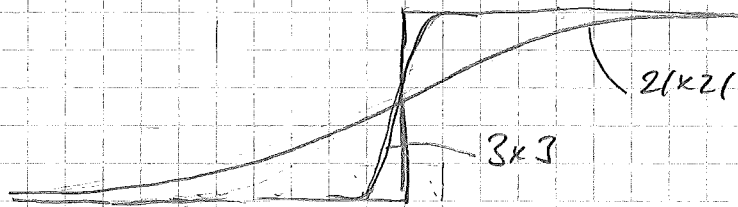
2 pixel
bred



2 pixel
høyd



d) 21x21 filter



kanten "smiddes" med
med 21x21 og 3x3