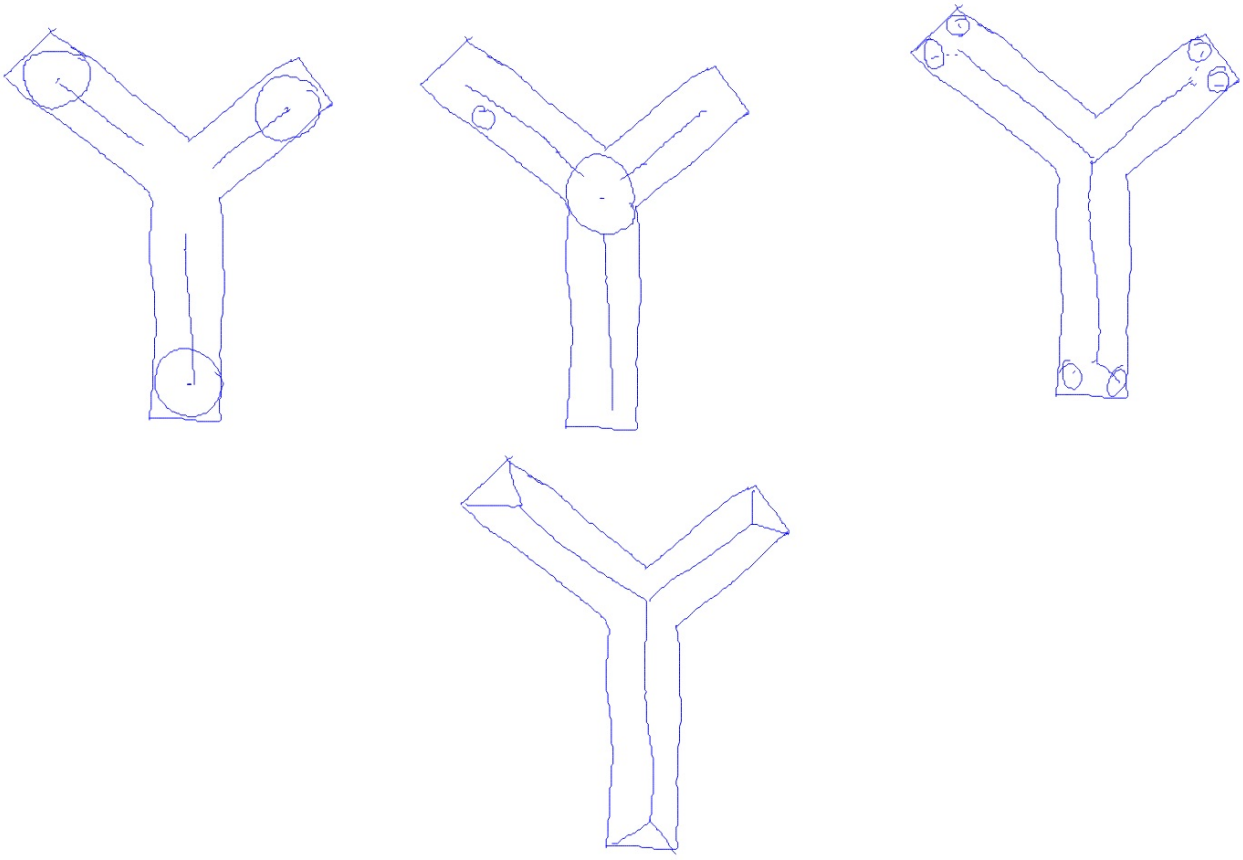
Skeleton



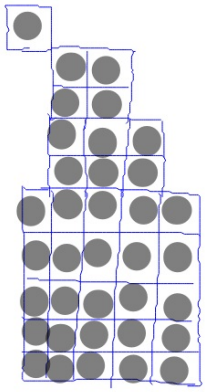
$$S(A) = \bigcup_{k=0}^{K} S_k(A)$$

$$S_k(A) = (A \ominus kB) - (A \ominus kB) \circ B$$

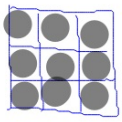
Reconstruction

$$A = \bigcup_{k=0}^{K} (S_k(A) \oplus kB)$$

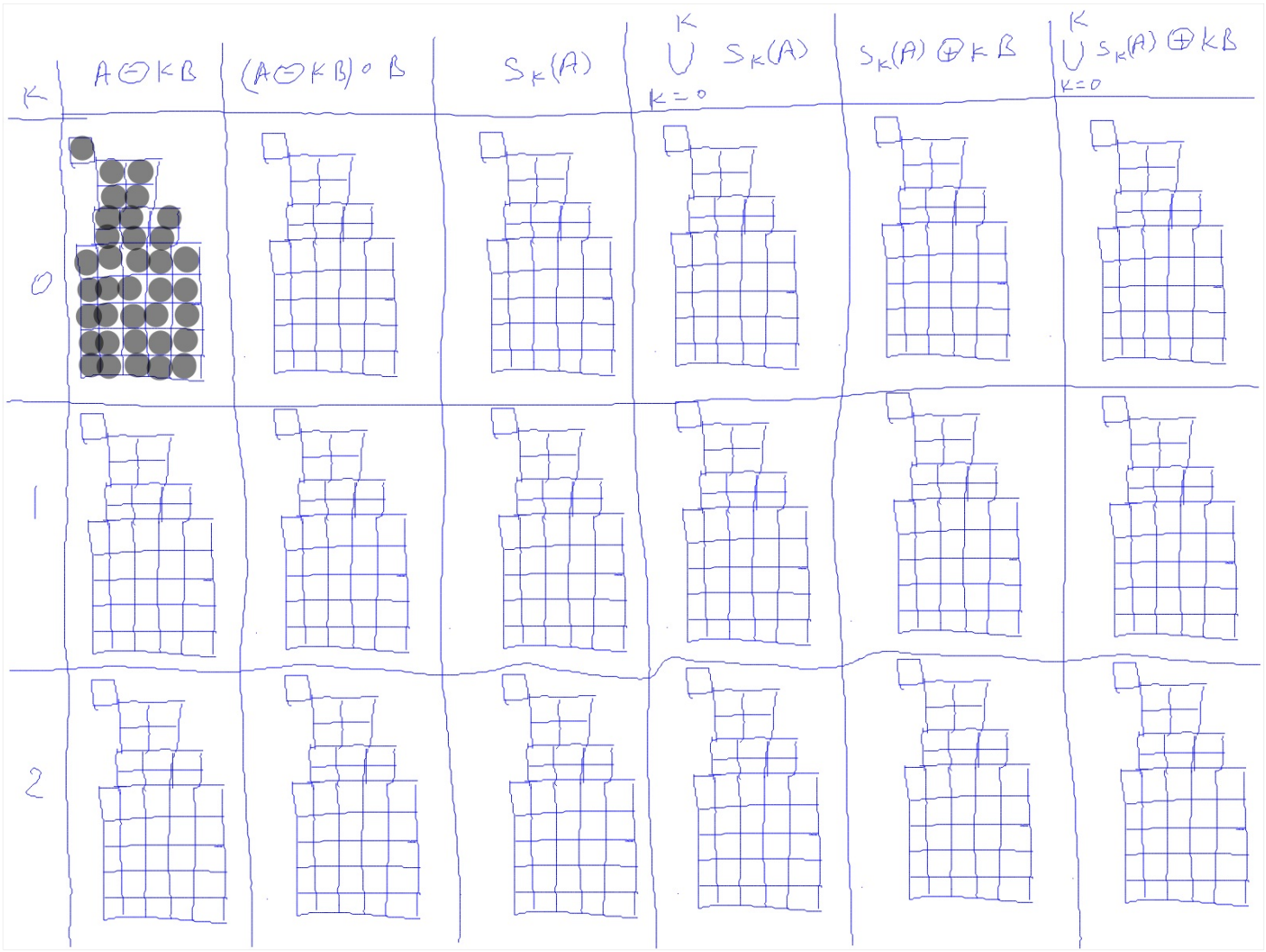
Example

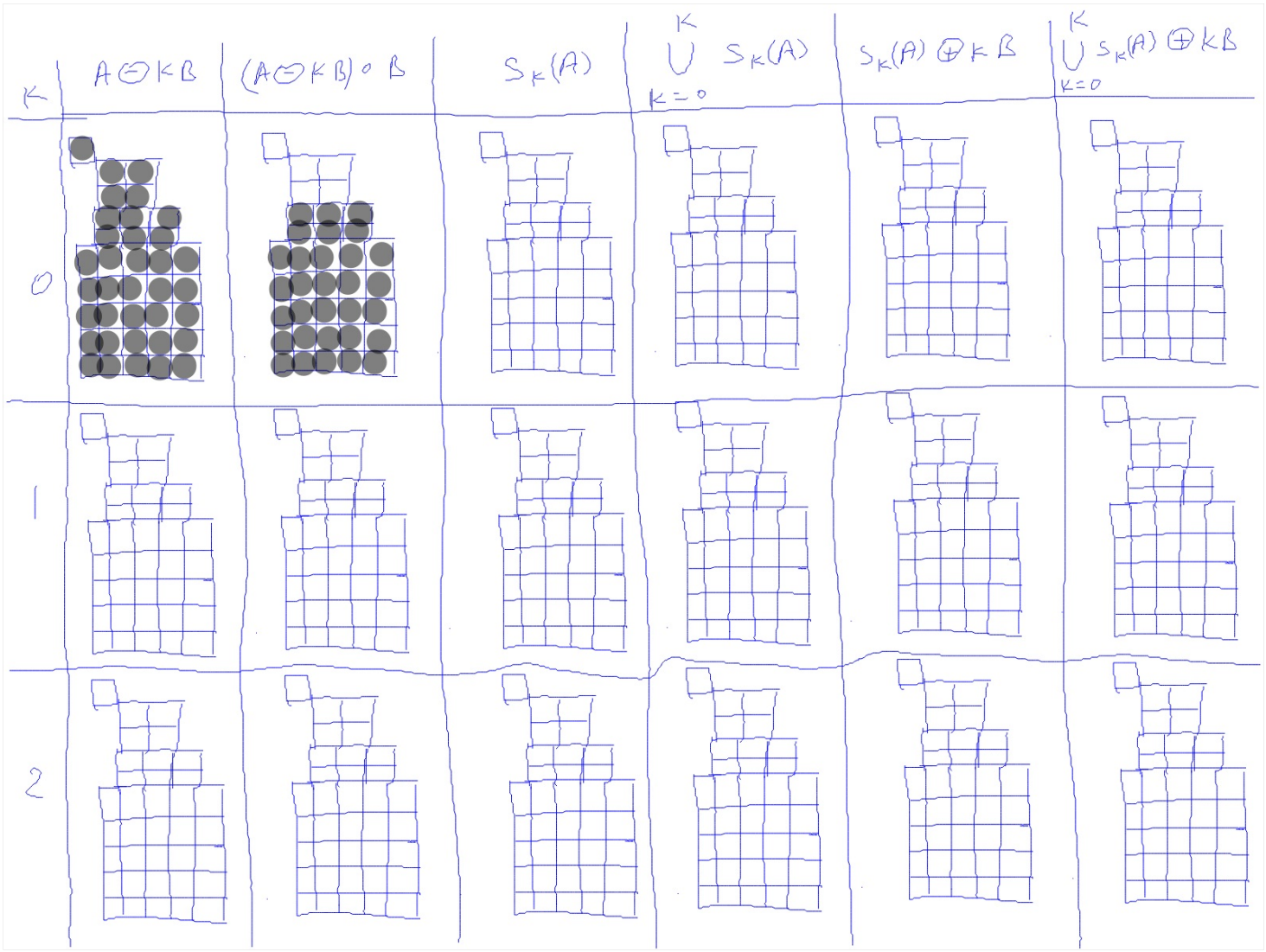


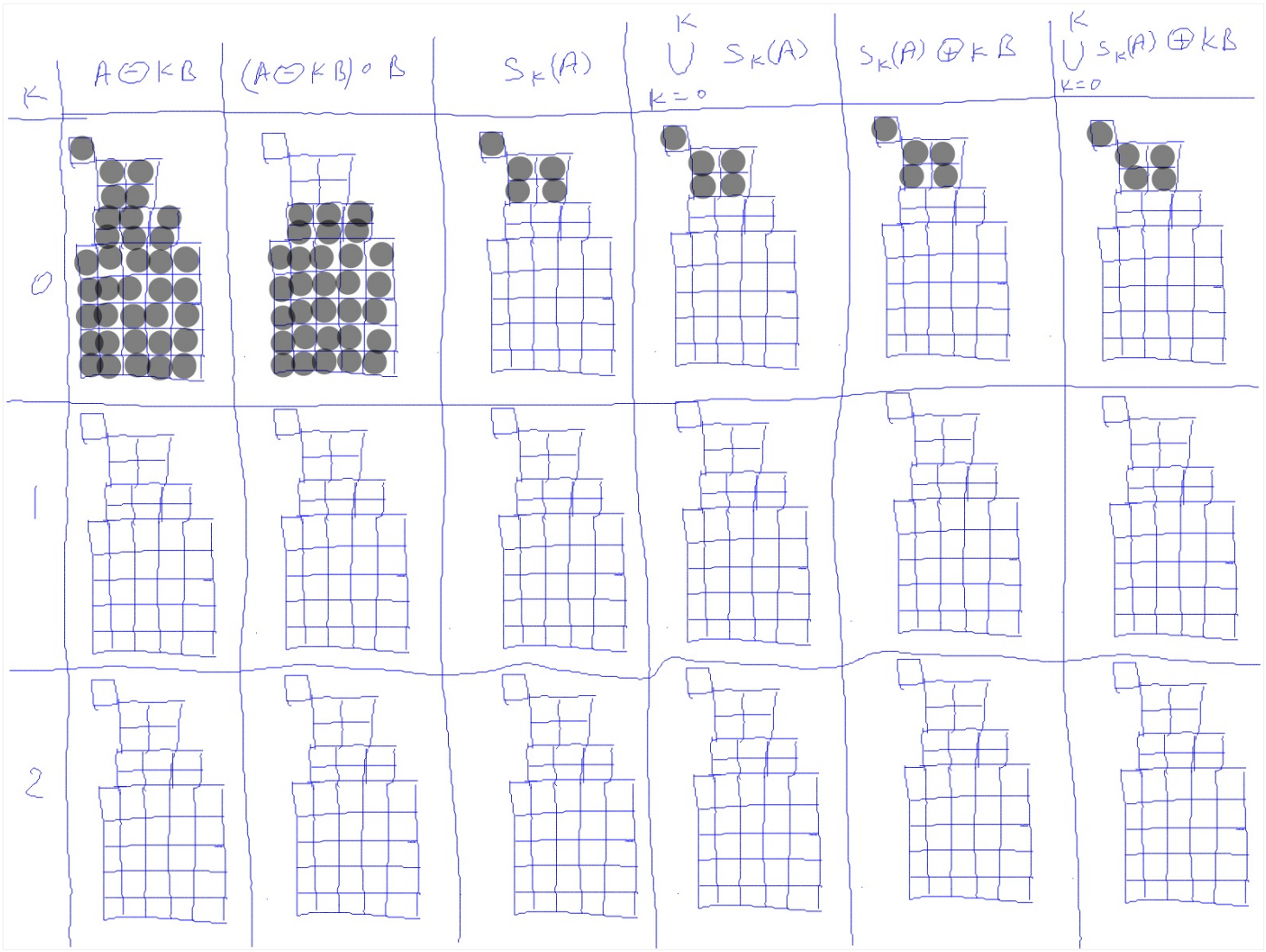
A

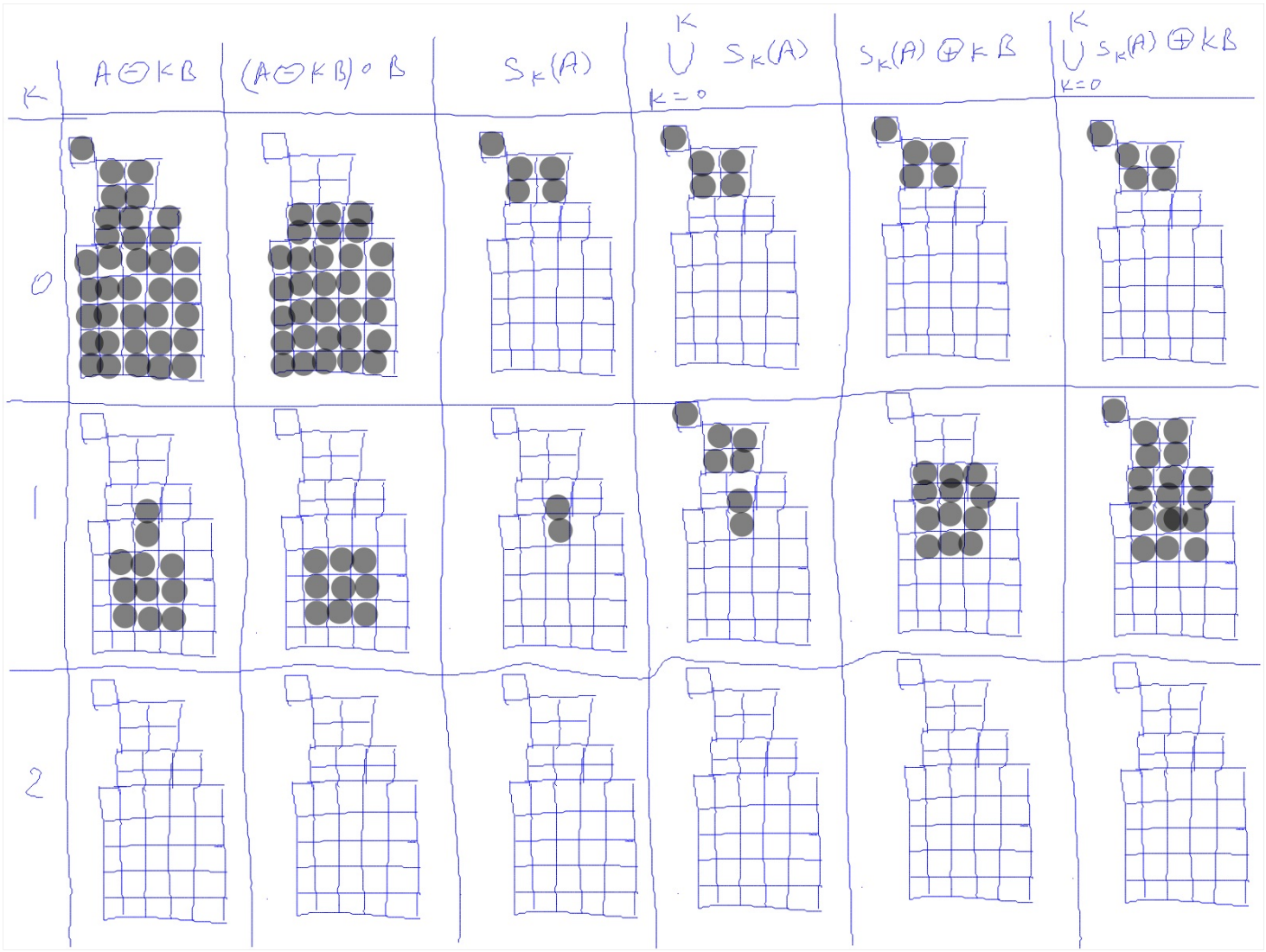


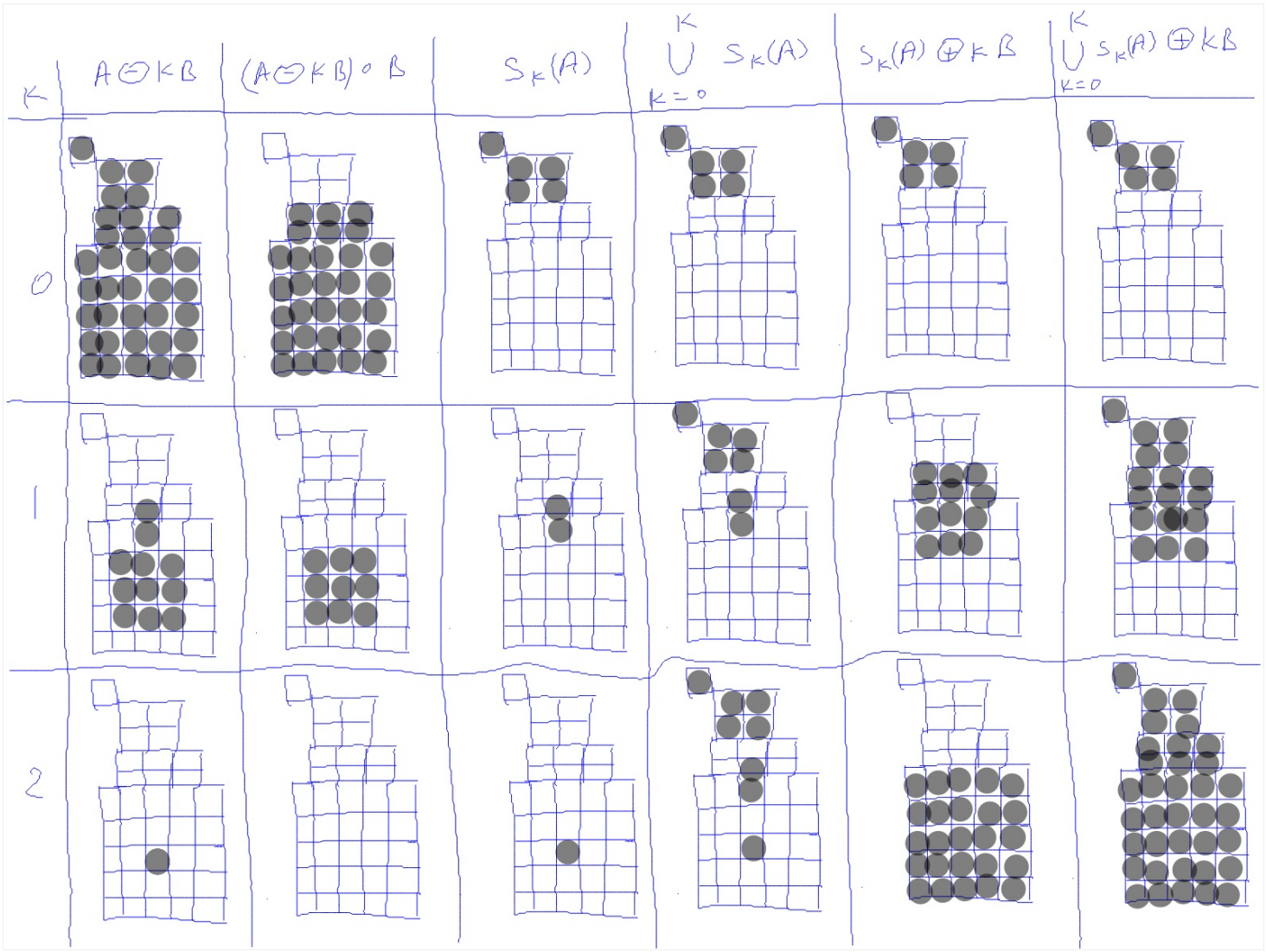
B


K
$A \ominus kB$
$(A \ominus kB) \circ B$
$S_k(A)$
$\bigcup_{k=0}^{K} S_k(A)$
$S_k(A) \oplus kB$
$\bigcup_{k=0}^{K} S_k(A) \oplus kB$
0
1
2


K
$A \ominus kB$
$(A \ominus kB) \circ B$
$S_k(A)$
$\bigcup_{k=0}^{K} S_k(A)$
$S_k(A) \oplus kB$
$\bigcup_{k=0}^{K} S_k(A) \oplus kB$
0
1
2


K
$A \ominus K B$
$(A \ominus K B) \circ B$
$S_K(A)$
$\bigcup_{K=0}^{K} S_K(A)$
$S_K(A) \oplus K B$
$\bigcup_{K=0}^{K} S_K(A) \oplus K B$
0
1
2

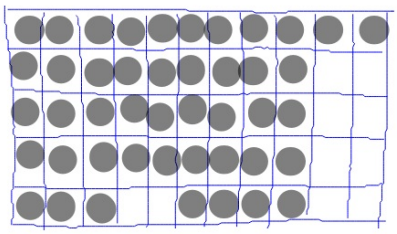

K
$A \ominus kB$
$(A \ominus kB) \circ B$
$S_k(A)$
$\bigcup_{k=0}^{K} S_k(A)$
$S_k(A) \oplus kB$
$\bigcup_{k=0}^{K} S_k(A) \oplus kB$
0
1
2


K
$A \ominus_K B$
$(A \ominus_K B) \circ B$
$S_K(A)$
$\bigcup_{K=0}^{K} S_K(A)$
$S_K(A) \oplus_K B$
$\bigcup_{K=0}^{K} S_K(A) \oplus_K B$
0
1
2

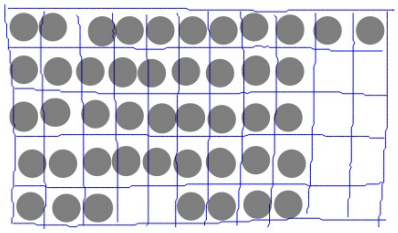
Thinning :-

$$A \otimes B = A - (A \circledast B)$$

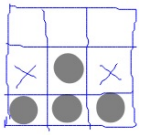
Example



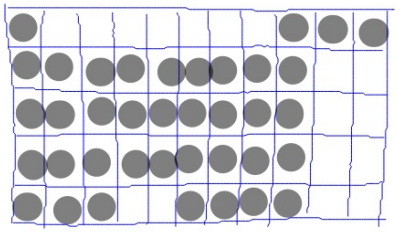
A



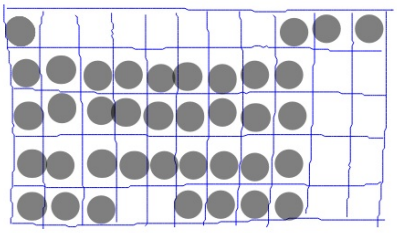
A



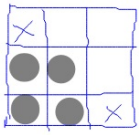
B^1



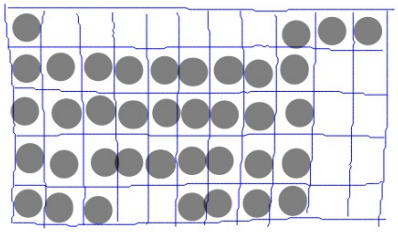
$A_1 = A \otimes B^1$



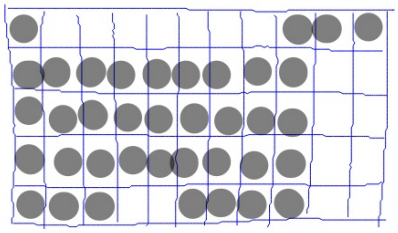
A_1



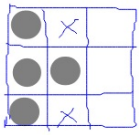
B^2



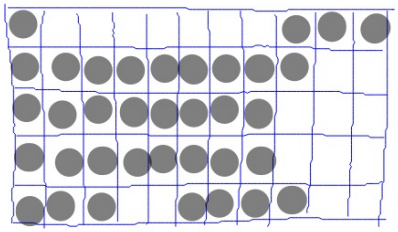
$A_2 = A_1 \otimes B^2$



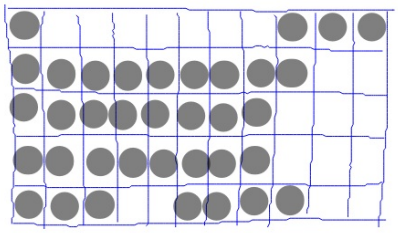
A_2



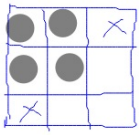
B^3



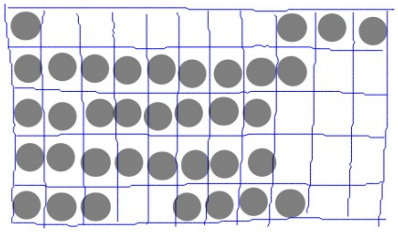
$A_3 = A_2 \otimes B^3$



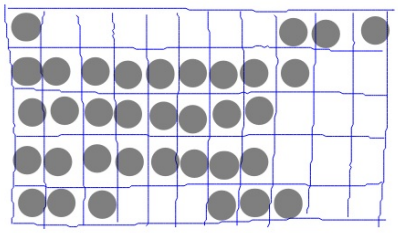
A_3



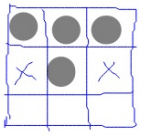
B^4



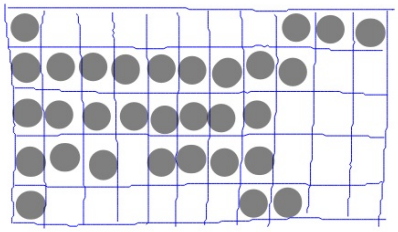
$A_4 = A_3 \otimes B^4$



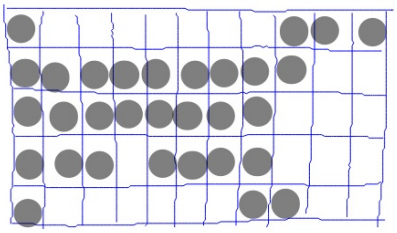
A_4



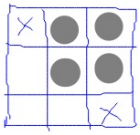
B^5



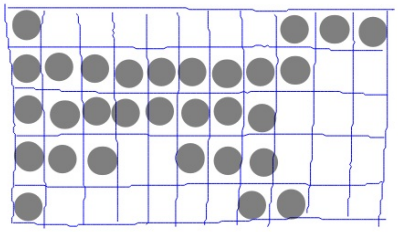
$A_5 = A_4 \otimes B^5$



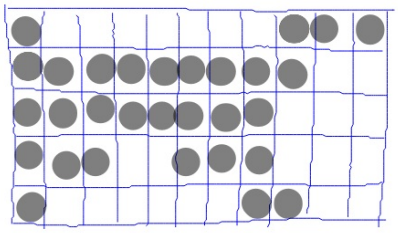
A_5



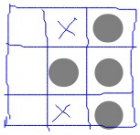
B^6



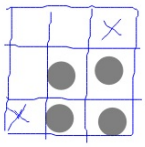
$A_6 = A_5 \otimes B^6$



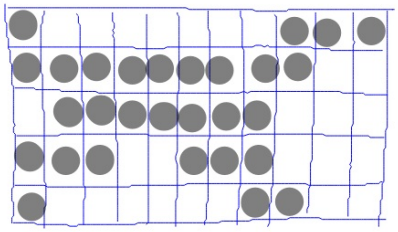
A_6



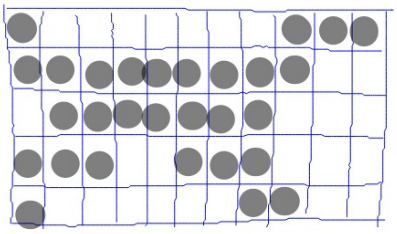
B^7



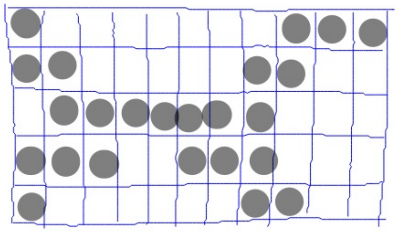
B^8



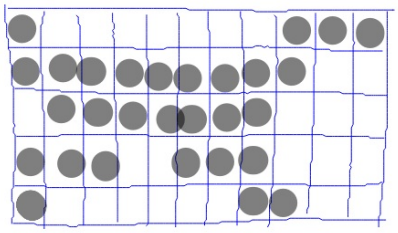
$A_8 = A_6 \otimes B^{7,8}$



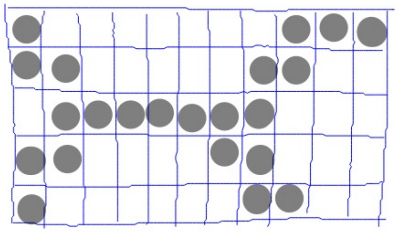
A_8



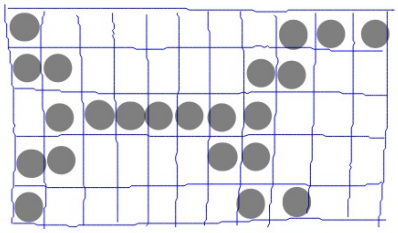
$A_{8,4} = A_8 \otimes B^{1,2,3,4}$



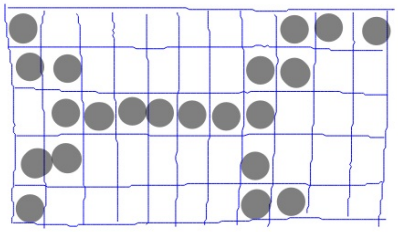
$A_{8,4}$



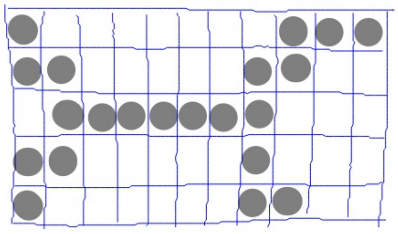
$A_{8,5} = A_{8,4} \otimes B^5$



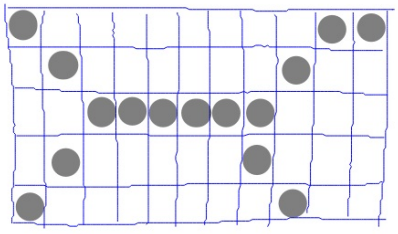
$A_{8,5}$



$A_{8,6}$



$A_{8,6}$



$A_{8,6}$ m-connectivity