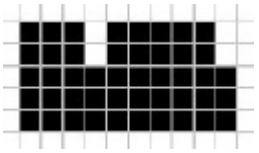
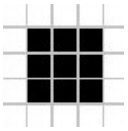
Morphological operations

Exercise 1

The boundary of a set A of object pixels, denoted , can be obtained by first eroding A by the structure element B, and then performing the set difference between A and its erosion. That is,
$\beta(A) = A / (A \ominus B)$

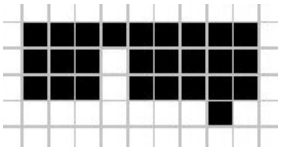
A B





a)
Apply this algorithm and present the intermediate result $A \ominus B$ and the final result $A \ominus B$

b) Apply the ”open” operation for the object below. Use the same structure element as in a).



c) Apply the ”close” operation to the same object as in b). Use the same structure element as in a).

d) Apply the ”attack from different directions” in order to shrink the object in b) into a skeleton