1. (Pen and paper) Consider the image depicted in the figure, which we want to binarize using a region growing algorithm. For this purpose, the detection criteria “intensity value >= 8” and aggregation criteria “intensity >= (mean-1.5)” are used.

   a. Highlight the segmented region in the following board, indicating for each point the step of the algorithm in which it was obtained.

   b. Discuss the possibility of obtaining the same segment through binarization based on histogram preceded by an adequate pre-processing operation.

6	6	6	5	5	6	6
6	4	3	4	4	4	7
6	4	5	6	3	4	7
5	3	6	7	6	4	5
5	3	4	8	6	4	5
5	5	4	2	3	4	5
6	5	4	4	4	4	6
7	6	6	5	5	6	7

mean = 5

aggregation criteria >= 3,5

a.

6	6	6	5	5	6	6
6	4	3	4	4	4	7
6	4	5	6	3	4	7
5	3	6	7	6	4	5
5	3	4	8	6	4	5
5	5	4	2	3	4	5
6	5	4	4	4	4	6
7	6	6	5	5	6	7

detection

aggregation