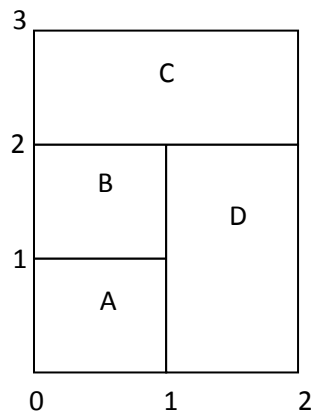


Exercise 4

For a new production plant (which is supposed to hold areas A, B, C, and D) the following initial layout is given:



Distances between areas are assumed to be the rectilinear distance between centroid locations. Try to improve the initial solution by applying CRAFT algorithm (pairwise exchanges). The material flows between areas are given in the following table:

Material Flow	A	B	C	D
A	0	5	10	4
B	5	0	6	2
C	10	6	0	2
D	4	2	2	0

Hint: elements of an area always have to be neighboured, i.e. they have to share at least 1 common boundary with at least 1 of the remaining elements of their area. E.g.

D	D
A	B

➔ Valid assignment!

D	B
A	D

➔ Invalid assignment!