

## Exercise 5

1. Show that the fractional multisection problem for  $m = 2$  regions such that at most one circuit obtains a fractional assignment, can be solved in  $O(n \log n)$ , where  $n = |\mathcal{C}|$ , independently from the cost function by a simple algorithm, without using a flow algorithm. (4 points)
2. Show that the single row algorithm can be used to minimize the linear bounding box netlength, instead of the quadratic movement, in the single row placement with fixed ordering. (Show how to define the functions  $f_i$ .) (8 points)

The deadline for all problems is **Tuesday May 27 at 12:15**, before the lecture.