

## Exercises for Spatial Databases and GIS

### Sheet 6 (until 08.12.2017)

#### Exercise 1 (Approximations)

- Which topological relations may occur between two spatial objects if the given topological relation exists between their conservative/ progressive approximations?
  - Disjoint
  - Equal
  - Contains
  - Overlap
- Why do spatial indexes usually use a conservative approximation?
- Under which circumstances would a progressive approximation be more suitable than a conservative one?

#### Exercise 2 (Pseudo-quadtrees)

Construct pseudo-quadtrees for the points on the right,

- one that is balanced, i.e. all leaves are on the same level.
- another one that has as few Nil-pointers as possible.

