## Exercise for the lecture

# **Algorithms for Radio Networks**

Winter 2013/14

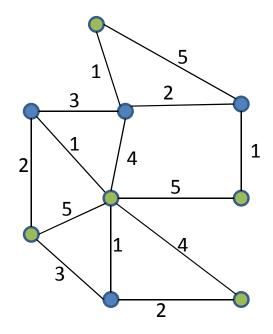
# Sheet 4

## **EXERCISE 1:**

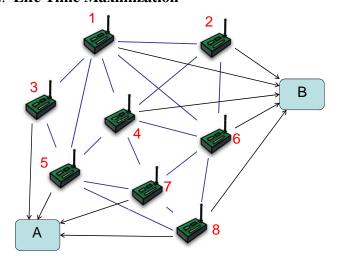
#### 1. Steiner Trees

Consider the right undirected weighted graph G(V, E). The green vertices are the terminals (sources and destinations).

- Compute a Steiner tree using the algorithm based on the MST from the lecture?
- How many Steiner points are formed?
- Is the solution optimal?



#### 2. Life Time Maximization



Consider the left sensor network. Find optimal the solutions for

- Disjoint Set Cover
- Connected-Disjoint Set Cover