

# Analysis of Algorithms: Assignment 3

Due date: January 25 (Thursday)

## Problem 1

Write pseudocode for the  $\text{MERGE}(A, p, q, r)$  procedure.

## Problem 2

Write an algorithm that combines  $\text{INSERTION-SORT}$  and  $\text{MERGE-SORT}$ . It should use  $\text{INSERTION-SORT}$  for small segments of the array, and recursively merge sorted segments. A segment  $A[p..r]$  is “small” if its length is no larger than some fixed value  $k$ , that is,  $r - p < k$ .