

# Problem Set 5

Questions to practice amortized analysis.

## Question 1

A sequence of  $n$  operations are performed on a data-structure. The  $i$ th operation costs  $i$  if  $i$  is an exact power of  $k$  for some fixed integer  $k \geq 2$  and 1 otherwise.

- Use aggregate analysis to determine amortized cost per operation.

## Question 2

Redo the analysis of the dynamic array using accounting method.