1. **SOLUTION:**

   We suppose the list L has members: $length$ denoting the length of the list, or number of elements in the list; $data[i]$ denoting the i-th element of the list. Assuming the index starts from 1.

   Therefore, just cut down the length of l to disable elements after the i-th in the list and w obtain $L.length := L.length - k$, so the elements $data[i+1, i+2, \cdots, length]$ will be "ignored", or deleted.

   Since this only requires one instruction thus the complexity has nothing to do with k, the answer should be $\Theta(1)$.

2. (a) **SOLUTION:**

   Solution to 2(i)

   (b) **SOLUTION:**

   Solution to 2(ii)

   (c) **SOLUTION:**

   Solution to 2(iii)

3. **SOLUTION:**

4. **SOLUTION:**

   Please refer to the code bundle submitted.