Abhilash Ambati
CptS 350

HW-6

2.) $T_w(n) = \sum_{k=1}^{n-1} O((kn)^{1.5q})$

where k is number of iteration.

$= O(n^{1.5q}) \sum_{k=1}^{n-1} k^{1.5q}$

$= O(n^{1.5q}) \; O(n^{2.5q})$

$= O(n^{4.18})$

3.) divide the n bits string into two groups.

step 1: write formula

$Bk(n,n) = Bk(n/2, n) + B_k(n/2, n) + O(n/2 \cdot n)^{1.59}$

$G(n) = 2G(n/2) + O(\frac{n^2}{2})^{1.59}$

Step 2: guess $G(n) = O(n^{2 \propto 1.59})$

that is $T_w(n) \leq C \cdot n^{2 \propto 1.59}$ for all

n, for all some $C > 0$

Step 3.

$$\text{I.W } \forall i < n,\ G(i) < c \cdot i^{2 \cdot 1.59}$$

$$G(n) = 2C(n/2)^{2 * 1.59} + O(n^2/n)^{1.59}$$

$$= 2C_1(n/2)^{2 \times 1.59}$$

$$= O(n/2)^{2 \times 1.59}$$