COMP 3761 Lab #1

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(1.1)

**A)**

n-1

**Σ** (i \* i + 1)2

i =0

**B)**

n i-1

**Σ Σ** (i+1)\*2(m-1)

i =1 m=1

**C)**

n n n

**Σ** i **Σ** j**Σ** k

i =1 j=1 k=1

**D)**

n-1 i

**Σ Σ** (i + j + 1)

i = 0 j=0

(1.2)

**A)** Multiplication

**B)** Multiplication

**C)** Multiplication

**D)** Addition

(1.3)

(1.4)

**A)** O(n)

**B)** O(n2)

**C)** O(n3)

**D)** O(n2)

2.

**A)**

inversionCount(A[0..n-1])

count ← 0

for i to n-1

for j ← i+1 to n

if A[i] > A[j]

count++;

**B+C+D+E)**

**Output:**

**20:26 ~/Desktop/3761/lab $ javac lab1.java && java LabOne**

**Enter a file name: IntegerArray\_10000.txt**

**Number of inversions: 24936914**

**Number of element comparisons: 49995000**