

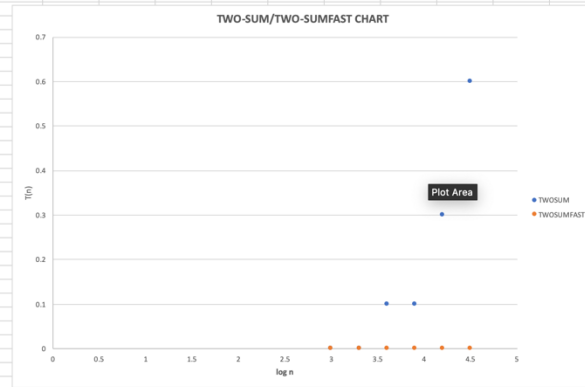
Task 2:**Lab4 Report.**

Names: Anisha Bhattacharya
Godbless Chille
URNetID/no: abhatta9/31564472
Gchille/31528986

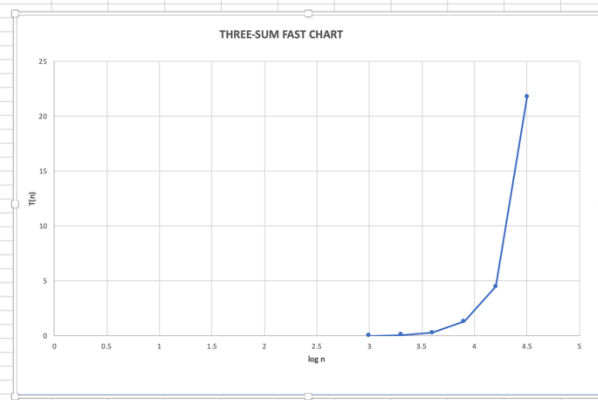
Task 3: Estimating Run-Times for 32Kints.txt and 1MKints.txt

Units in seconds (except for special cases)	Estimated Run-time for 32Kints.txt	Estimated Run-time for 1Mints.txt	Actual Run-time for 32Kints.txt	Actual Run-time for 1Mints.txt
TwoSum	0.5s	11.45s	0.6s	12.67
TwoSumFast	0.0s	9.88s	0.1s	8.78
ThreeSum	13300s	76885s	16126.3s	More than 15 minutes
ThreeSumFast	31000s	32323s	21.8s	More than 10 minutes

Task 2:

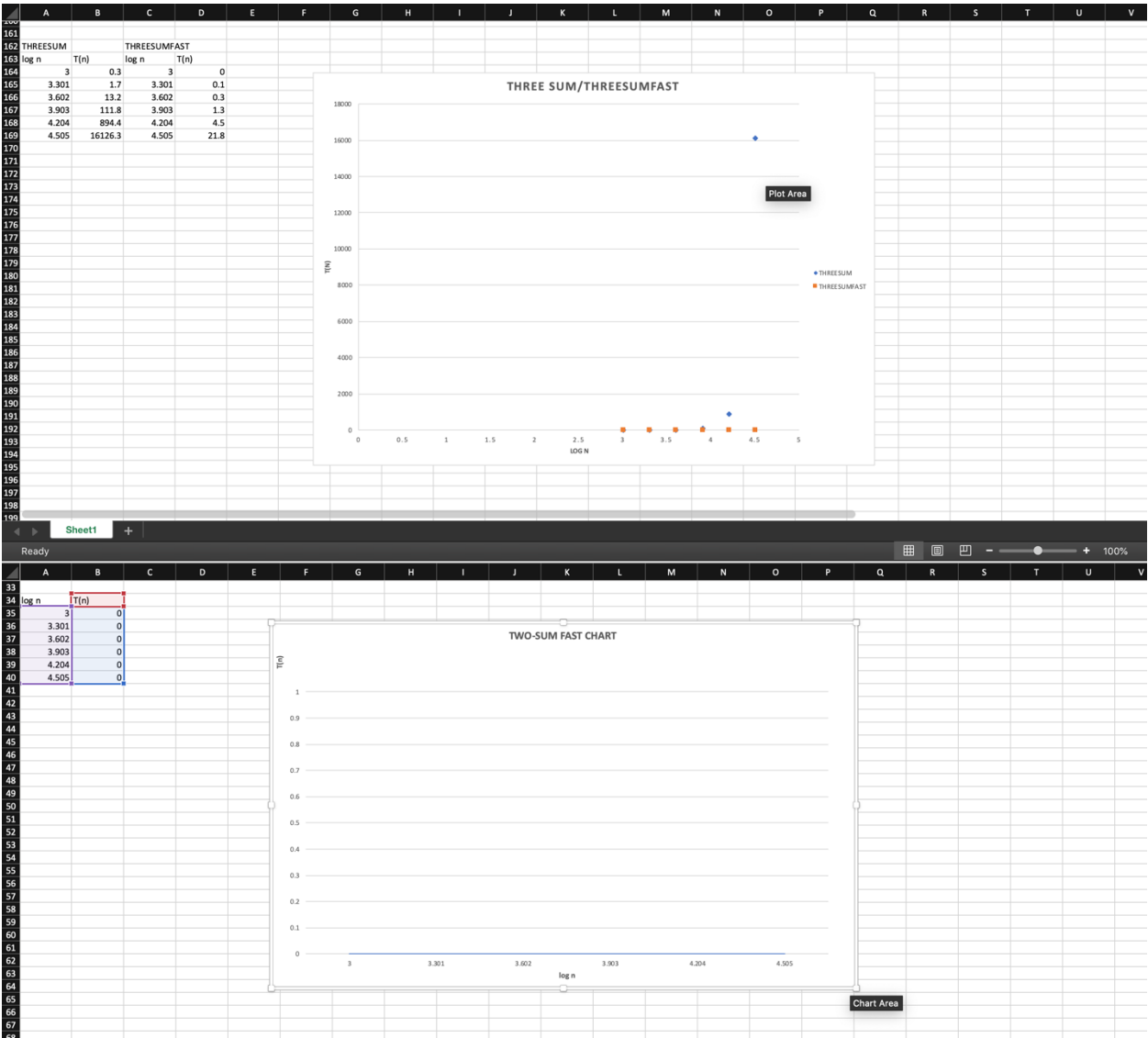
[illegible]

	$\log n$	$T(n)$
96		
97	3	0
98	3.301	0.1
99	3.602	0.3
00	3.903	1.3
01	4.204	4.5
02	4.505	21.8



	A	B
33		
34	log n	T(n)
35	3	0
36	3.301	0
37	3.602	0
38	3.903	0
39	4.204	0
40	4.505	0

Task 2:



Task 2:

Last login: Tue Feb 4 23:52:04 on tty000

The default interactive shell is now zsh.

To update your account to use zsh, please run 'chsh -s /bin/zsh'.
For more details, please visit <https://support.apple.com/kb/HT200050>.

```
dhcp-10-4-3-66:~$ godblesschille$ pwd
/Users/godblesschille
dhcp-10-4-3-66:~$ godblesschille$ cd Desktop/
dhcp-10-4-3-66:~/Desktop$ godblesschille$ pwd
/Users/godblesschille/Desktop
dhcp-10-4-3-66:~/Desktop$ godblesschille$ ls
CS_172
CS172Labs
CompSci_171
EQ0REPS
Eclipse.app
Four_year_plan_files
MTh162
MY COURSE SCHEDULE
Oldies
REL102
Rising Leaders Class
Screen Shot 2020-02-04 at 9.40.48 PM.png
Udemy
Writing_105
college_courselist
JavaFiles
psychology_111
resume
dhcp-10-4-3-66:~/Desktop$ godblesschille$ cd CS172Labs/
dhcp-10-4-3-66:~/Desktop$ godblesschille$ ls
LAB4
dhcp-10-4-3-66:~/Desktop$ godblesschille$ cd LAB4/
dhcp-10-4-3-66:~/LAB4$ godblesschille$ ls
1Kints.txt          In.java             ThreeSumFast.class
1Mints.txt          StdOut.class        ThreeSumFast.java
2Kints.txt          StdOut.java         TwoSum.class
3Kints.txt          StdRandom.java      TwoSum.java
4Kints.txt          Stopwatch.class     TwoSumFast.class
8Kints.txt          Stopwatch.java      TwoSumFast.java
In.class            ThreeSum.class
In.java             ThreeSum.java
dhcp-10-4-3-66:~/LAB4$ godblesschille$ javac ThreeSum.java
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSum 32Kints.txt
20200204_21026_3 20200204_042407 tbiwas2 32Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$
dhcp-10-4-3-66:~/LAB4$ godblesschille$
```

```
dhcp-10-4-3-66:~/LAB4$ godblesschille$ javac TwoSum.java
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSum 1Kints.txt
1 0.0 20200204_210441 tbiwas2 1Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSum 2Kints.txt
2 0.0 20200204_210652 tbiwas2 2Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSum 4Kints.txt
3 0.1 20200204_210714 tbiwas2 4Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSum 8Kints.txt
19 0.1 20200204_210729 tbiwas2 8Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSum 16Kints.txt
66 0.3 20200204_210737 tbiwas2 16Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSum 32Kints.txt
273 0.6 20200204_210746 tbiwas2 32Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ javac ThreeSum.java
ThreeSum.java:70: error: illegal start of expression
    public static int count(int[] a) {
                           ^
1 error
dhcp-10-4-3-66:~/LAB4$ godblesschille$ javac ThreeSum.java
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSum 1Kints.txt
70 0.3 20200204_211002 tbiwas2 1Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSum 2Kints.txt
528 1.7 20200204_211015 tbiwas2 2Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSum 4Kints.txt
4039 13.2 20200204_211043 tbiwas2 4Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSum 16Kints.txt
255181 894.4 20200204_212607 tbiwas2 16Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ javac TwoSumFast.java
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSum 1
16Kints.txt 1Kints.txt 1Mints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSum 1
16Kints.txt 1Kints.txt 1Mints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSum 1
16Kints.txt 1Kints.txt 1Mints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSum 1Kints.txt
1 0.0 20200204_212737 tbiwas2 1Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSumFast 1Kints.txt
1 0.0 20200204_212730 tbiwas2 1Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSumFast 2Kints.txt
2 0.0 20200204_212740 tbiwas2 2Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSumFast 4Kints.txt
3 0.0 20200204_212751 tbiwas2 4Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSumFast 8Kints.txt
19 0.0 20200204_212803 tbiwas2 8Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSumFast 16Kints.txt
66 0.0 20200204_212814 tbiwas2 16Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java TwoSumFast 32Kints.txt
273 0.0 20200204_212824 tbiwas2 32Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSumFast.java
Error: Could not find or load main class ThreeSumFast.java
dhcp-10-4-3-66:~/LAB4$ godblesschille$ javac ThreeSumFast.java
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSumFast 1Kints.txt
70 0.0 20200204_212900 tbiwas2 1Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSumFast 2Kints.txt
528 0.1 20200204_212910 tbiwas2 2Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSumFast 4Kints.txt
4039 0.3 20200204_212940 tbiwas2 4Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSumFast 8Kints.txt
32074 1.3 20200204_213012 tbiwas2 8Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSumFast 16Kints.txt
255181 4.9 20200204_213101 tbiwas2 16Kints.txt
dhcp-10-4-3-66:~/LAB4$ godblesschille$ java ThreeSumFast 32Kints.txt
2052358 21.8 20200204_213246 tbiwas2 32Kints.txt
```