ALGORITHM 1 ANALYSIS

| N | Runtime (ms) |
|-------|--------------|
| 1000 | 5 |
| 2000 | 2 |
| 4000 | 7 |
| 8000 | 34 |
| 16000 | 119 |
| 32000 | 474 |
| 64000 | 1914 |

ALGORITHM 2 ANALYSIS

| N | Runtime (ms) |
|-------|--------------|
| 1000 | 3 |
| 2000 | 3 |
| 4000 | 7 |
| 8000 | 15 |
| 16000 | 63 |
| 32000 | 251 |
| 64000 | 998 |

ALGORITHM 3 ANALYSIS

| N | Runtime (ms) |
|--------|--------------|
| 1000 | 0 |
| 8000 | 0 |
| 64000 | 0 |
| 512000 | 0 |
| 4e+6 | 2 |
| 3.3e+7 | 15 |
| 2.6e+8 | 119 |

HARDWARE:

 Processor
 Intel(R) Core(TM) i9-10900K CPU @ 3.70GHz 3.70 GHz

 Installed RAM
 16.0 GB (15.9 GB usable)

Asus GeForce GTX 1050 Ti 4 GB Phoenix Video Card

Current Software load:

