**SUMMARY**

## USC ID/s: 2251093786, 4533600561, 4940831677

## Datapoints

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| M+N | Time in MS (Basic) | Time in MS (Efficient) | Memory in KB (Basic) | Memory in KB (Efficient) |
| 16 | 0.088 | 0.303 | 1.7 | 1.4 |
| 64 | 2.284 | 3.233 | 44.4 | 10.2 |
| 128 | 9.245 | 12.376 | 175.4 | 21.4 |
| 256 | 32.573 | 43.969 | 680.7 | 53.5 |
| 384 | 66.812 | 89.799 | 1484.9 | 68.5 |
| 512 | 110.540 | 149.944 | 2624.2 | 72.4 |
| 768 | 386.755 | 391.585 | 5870.7 | 96.2 |
| 1024 | 793.139 | 765.319 | 10354.1 | 137.7 |
| 1280 | 1375.712 | 1301.526 | 16270.7 | 166.3 |
| 1536 | 2081.639 | 1998.153 | 23724.8 | 257.0 |
| 2048 | 3963.915 | 3809.872 | 65464.3 | 263.8 |
| 2560 | 6419.468 | 6334.944 | 65464.3 | 331.4 |
| 3072 | 9446.723 | 9433.821 | 93006.6 | 391.0 |
| 3584 | 13111.733 | 13261.012 | 128876.6 | 453.7 |
| 3968 | 16337.716 | 16641.914 | 154593.2 | 499.2 |

## Insights

### Graph1 – Memory vs Problem Size (M+N)

A graph with a blue line and a red line

Description automatically generated

#### Nature of the Graph (Logarithmic/ Linear/ Polynomial/ Exponential)

Basic: Polynomial

Efficient: Linear

#### Explanation:

### Graph2 – Time vs Problem Size (M+N)

A graph with a red line

Description automatically generated

#### Nature of the Graph (Logarithmic/ Linear/ Polynomial/ Exponential)

Basic: Polynomial

Efficient: Polynomial

#### Explanation:

## Contribution

(Please mention what each member did if you think everyone in the group does not have an equal contribution, otherwise, write “Equal Contribution”)

2251093786: Equal Contribution

4533600561: Equal Contribution

4940831677: Equal Contribution