アルゴリズムとデータ構造Ⅱ Ex09

s1270036 當銘雄紀

Q1 Strassen's Algorithm

1.

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| 行列サイズ | 通常の乗算 | Strassen's Algorithm |
| 4\*4 | 0.000001 | 0.000016 |
| 8\*8 | 0.000002 | 0.000036 |
| 16\*16 | 0.000019 | 0.000390 |
| 32\*32 | 0.000099 | 0.002456 |
| 64\*64 | 0.000745 | 0.013976 |
| 128\*128 | 0.004890 | 0.073765 |
| 256\*256 | 0.029955 | 0.501350 |
| 512\*512 | 0.246051 | 3.662341 |
| 1024\*1024 | 1.896867 | 24.269468 |
| 2048\*2048 | 15.753140 | 169.901133 |

2.

|  |  |
| --- | --- |
| BASE | Strassen's Algorithm |
| 64 | 9.138792 |
| 128 | 10.036800 |
| 256 | 11.817386 |
| 512 | 13.600907 |
| 1024 | 15.573045 |