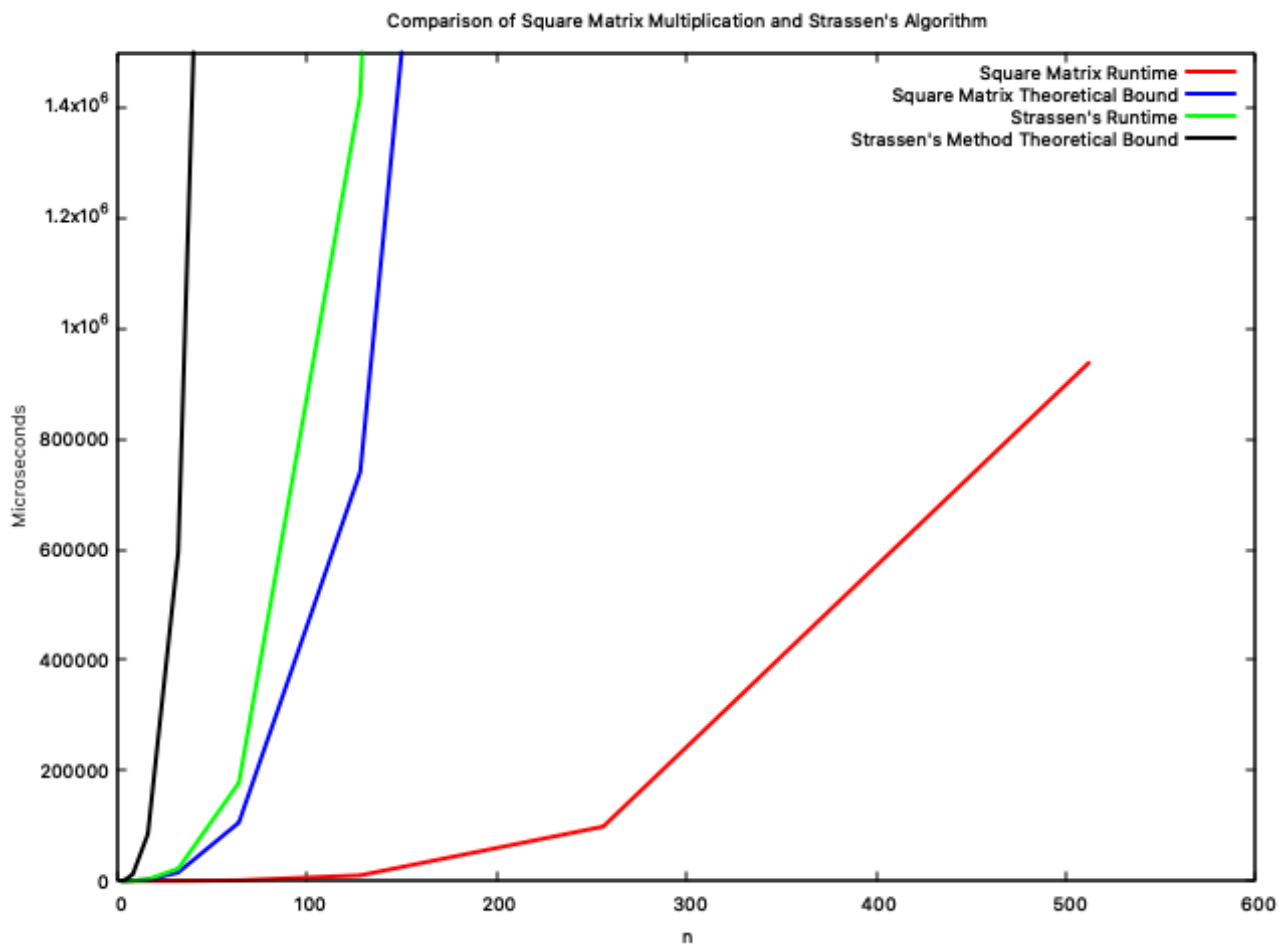
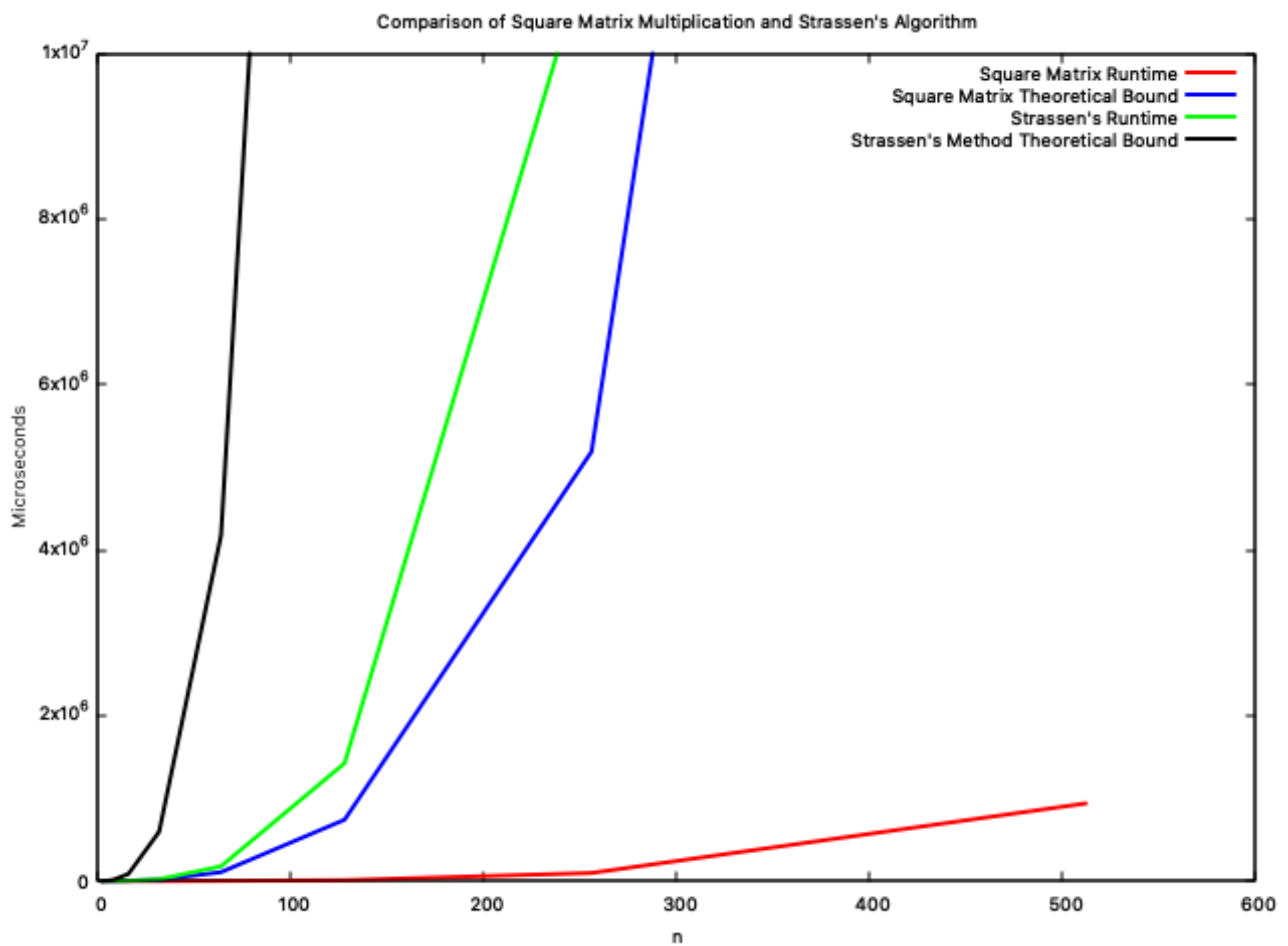
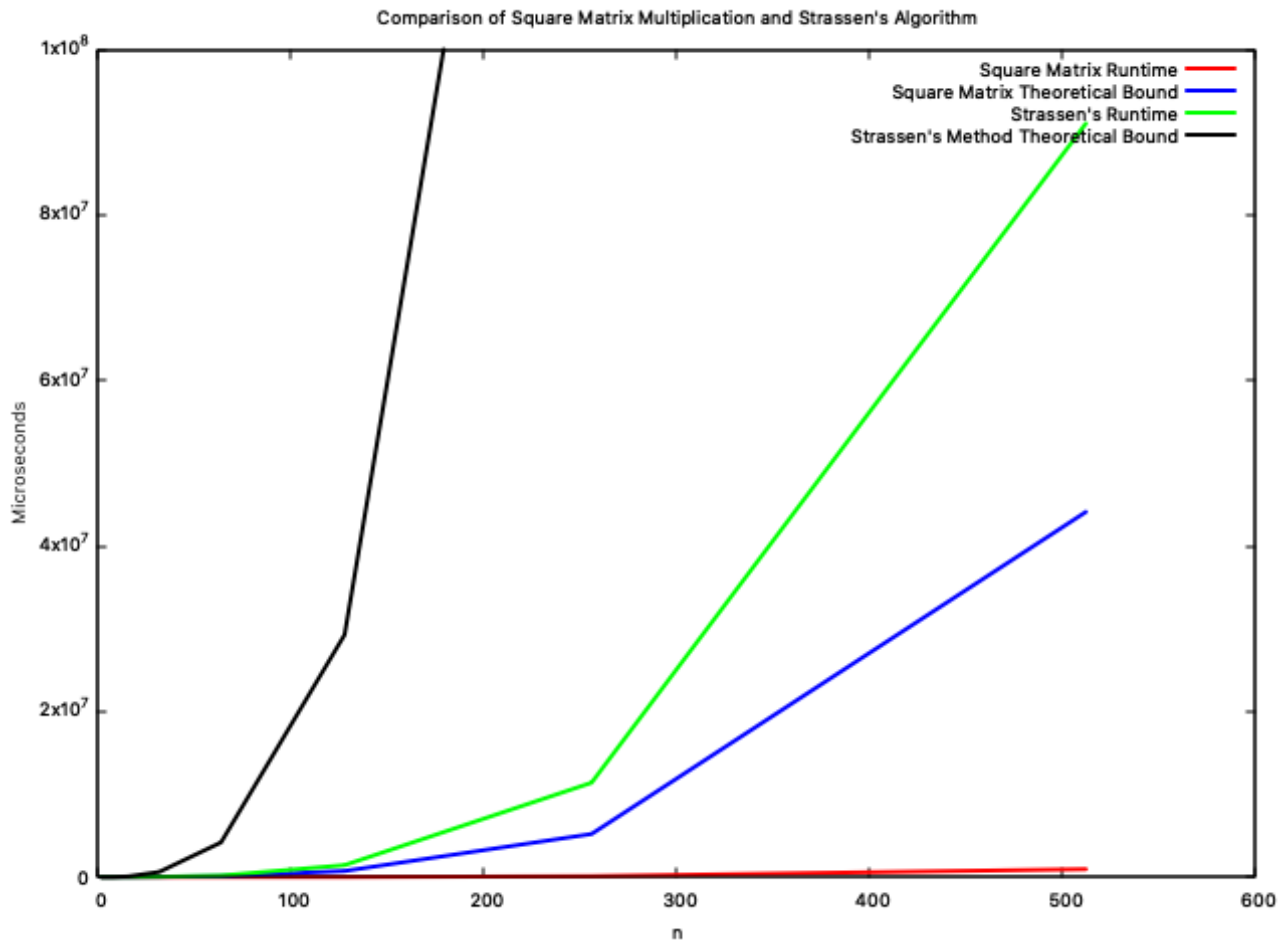
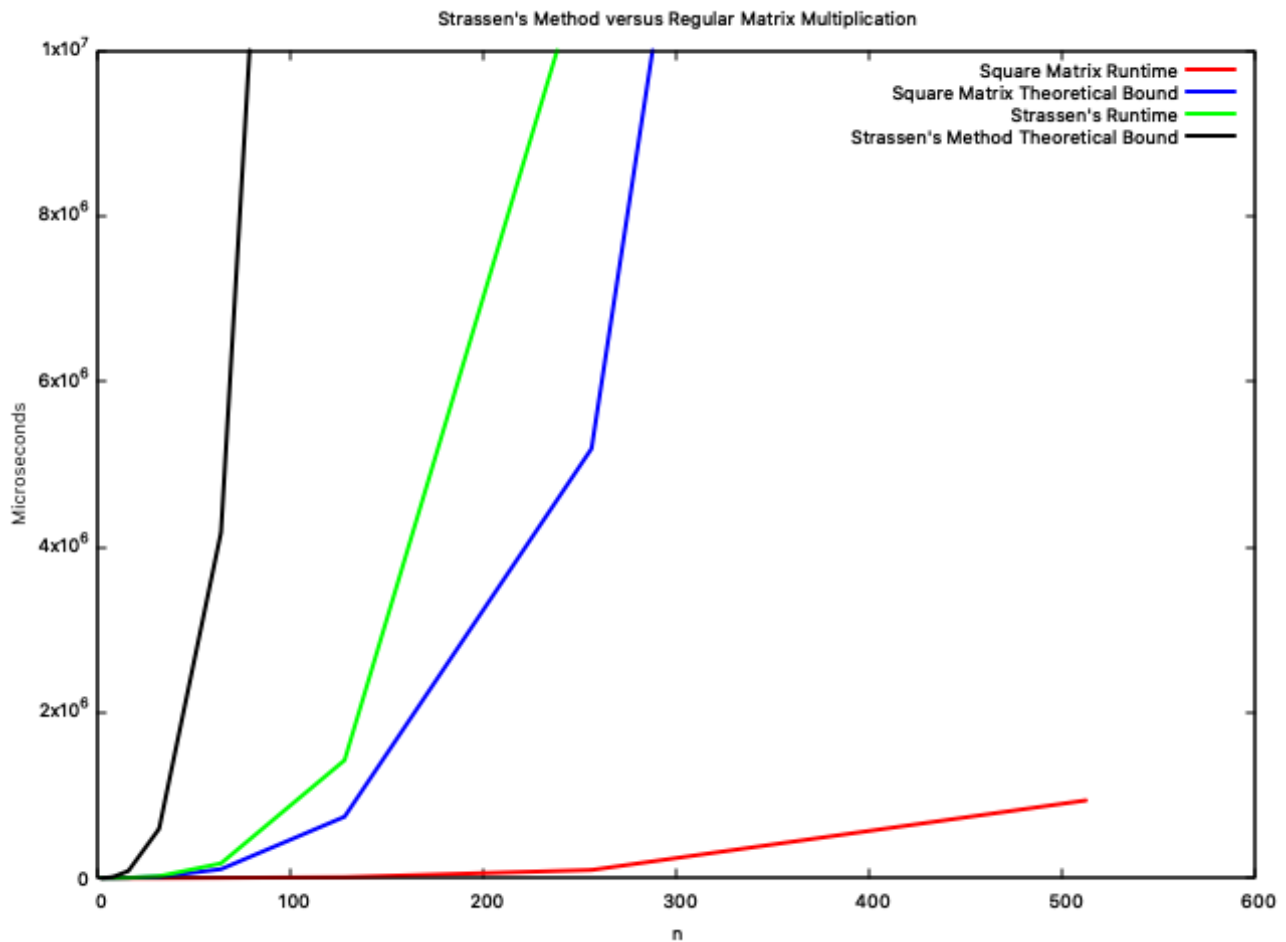


Note: The final plot with correct title is at the end. The other plots are with different y ranges.

n	Square Matrix Runtime	Square Matrix Theoretical Bound	Strassen's Method Runtime	Strassen's Method Theoretical Bound
2	2	5.42662	7	246.156
$2^2 = 4$	0	43.413	44	1726.25
$2^3 = 8$	3	347.304	304	12105.9
$2^4 = 16$	20	2778.43	2147	84897.1
$2^5 = 32$	161	22227.4	15235	595370
$2^6 = 64$	1218	177820	105678	4.17524E+06
$2^7 = 128$	10266	1.42256E+06	740545	2.92803E+07
$2^8 = 256$	98257	1.13805E+07	5.18944E+06	2.05338E+08
$2^9 = 512$	937904	9.10436E+07	4.4121E+07	1.44001E+09





**Final Graph Plot:**

For  $n = 4$ , we have matrix A:

```
1 1 1 4
1 1 2 3
2 2 4 2
4 3 2 2
```

And matrix B:

```
3 4 4 2
4 1 4 2
3 2 1 2
1 4 3 4
```

The product using square matrix multiplication is:

```
14 23 21 22
16 21 19 20
28 26 26 24
32 31 36 26
```

The product using Strassen's Method:

```
14 23 21 22
16 21 19 20
28 26 26 24
32 31 36 26
```