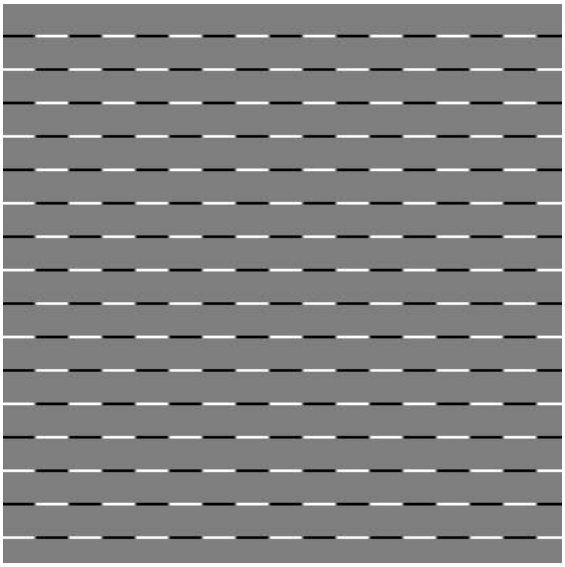
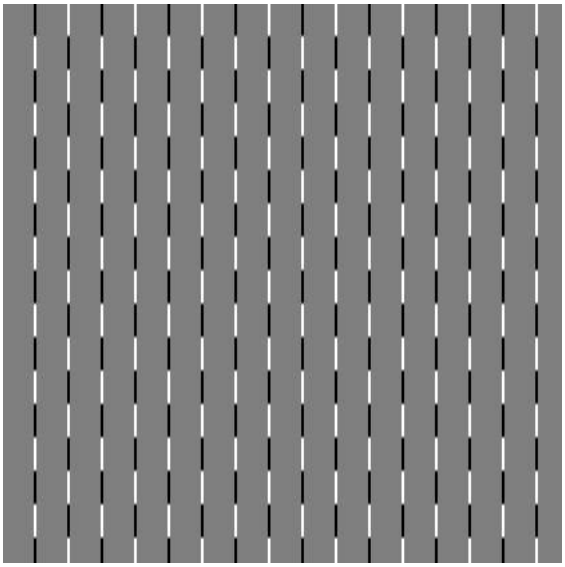
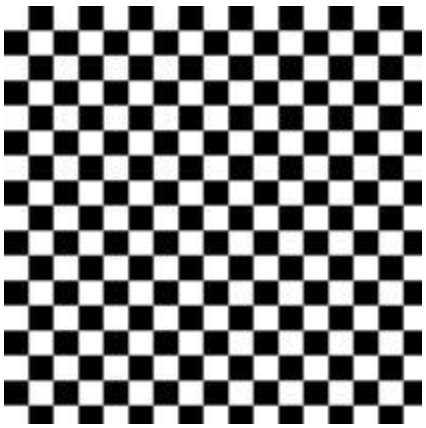
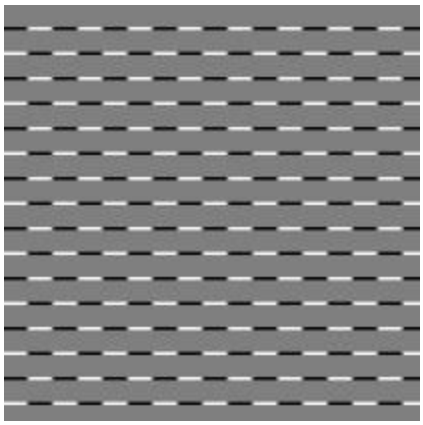
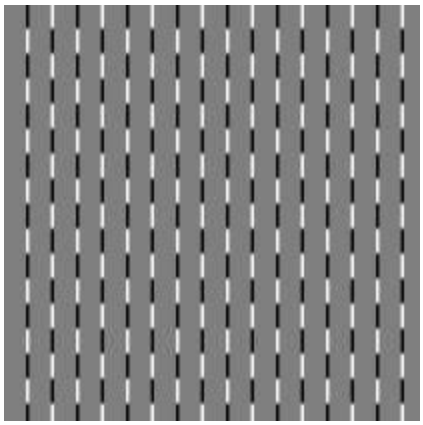
# Homework 1

Part A Output Images

| | |
|---|---|
| Task 1 |  |
| Task 2 |  |

| | |
|---|---|
| Task 3 |  |
| Task 4 |  |
| Task 5 |  |
| Task 6 | Original Image: |

Output Image:

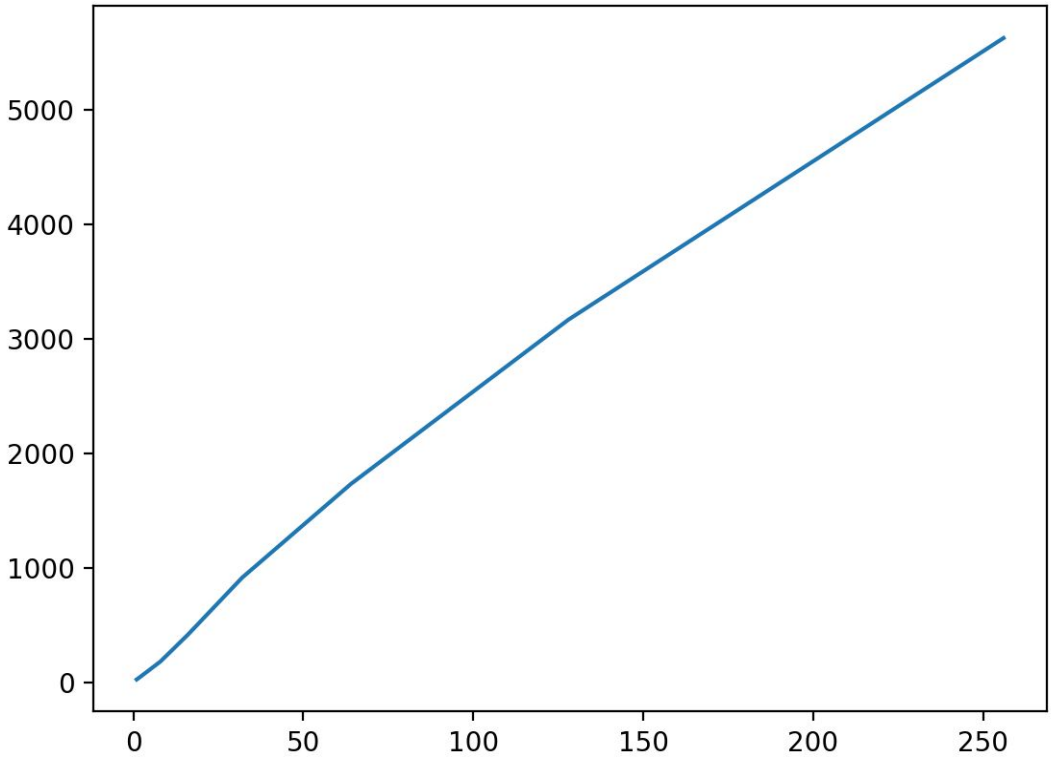
| | |
|---|---|
| Task 7 - 1 | |
| Task 7 - 2 | |

Part B

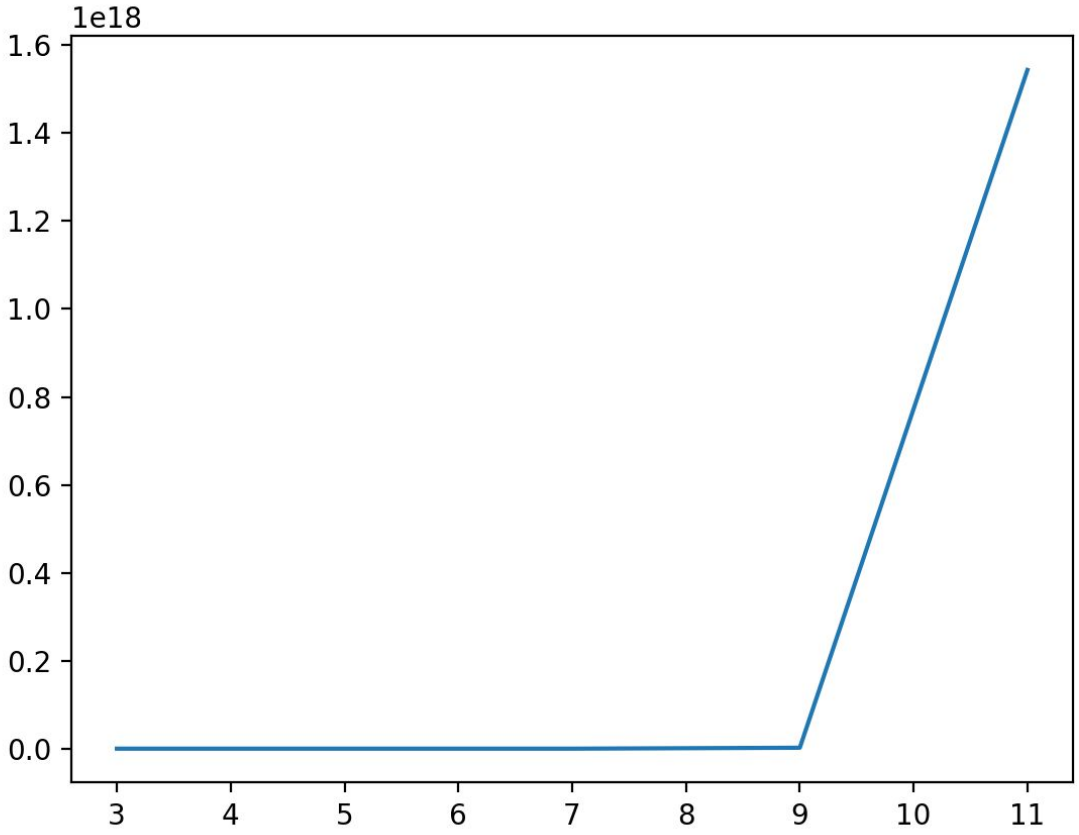
It take too long to generate the full result. Therefore, I have collected data up to 2^8.

| O_Channel | Time Taken (seconds) |
|---|---|
| 1 | 23.515645027160645 |
| 2 | 45.18569993972778 |

| | |
|---|---|
| 4 | 90.43279504776001 |
| 8 | 180.75114512443542 |
| 16 | 412.9355580806732 |
| 32 | 912.0210089683533 |
| 64 | 1730.588632106781 |
| 128 | 3165.599992990494 |
| 256 | 5625.0197241306305 |




Part C

| Kernel_Size | Number of Operations |
|---|---|
| 3 | 145899036 |
| 5 | 17127559152 |

| | |
|---|---|
| 7 | 4494743433180 |
| 9 | 2105236735781184 |
| 11 | 1543593200336927100 |