

## Convolution

Kernel = [3, 3]

Stride = [1, 1]

Input

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

Kernel

1	1	1
1	1	1
1	1	1

Output

18	18
27	27

## Convolution

### Zero Padded

Kernel = [3, 3]

Stride = [1, 1]

0	0	0	0	0	0
0	1	1	1	1	0
0	2	2	2	2	0
0	3	3	3	3	0
0	4	4	4	4	0
0	0	0	0	0	0

1	1	1
1	1	1
1	1	1

6	9	9	6
12	18	18	12
18	27	27	18
14	21	21	14

## Max Pooling

Kernel = [2, 2]

Stride = [2, 2]

Input

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

Output

2	2
4	4

## Average Pooling

Kernel = [2, 2]

Stride = [2, 2]

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

1.5	1.5
3.5	3.5