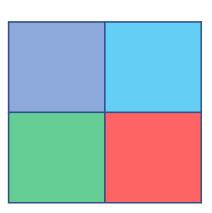


## Convolutional Neural Networks

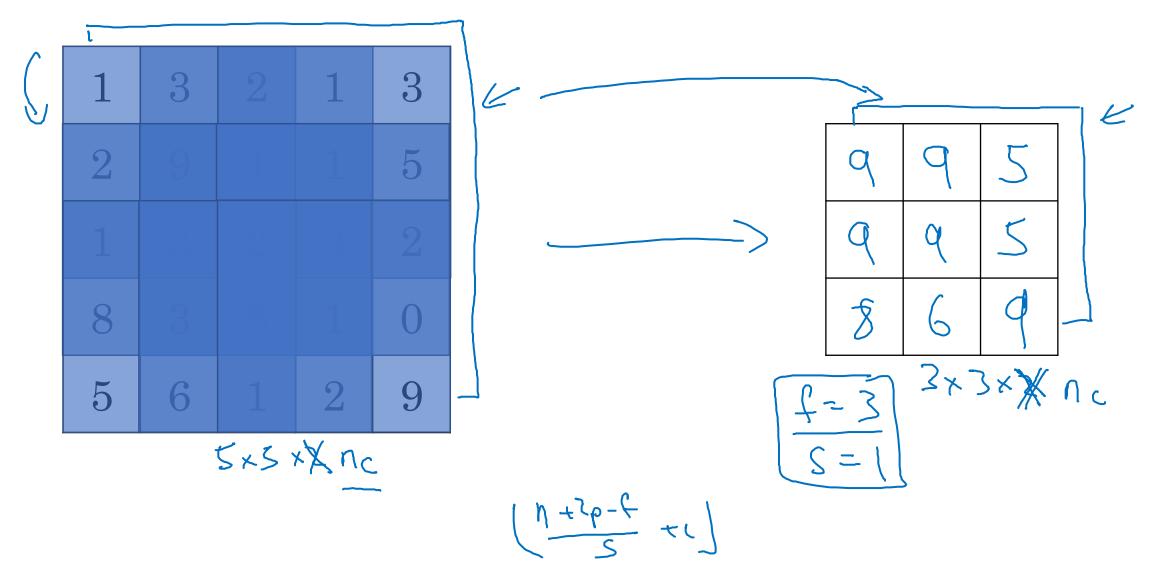
# Pooling layers

#### Pooling layer: Max pooling

1	3	2	1
2	9	1	1
1	3	2	3
5	6	1	2



#### Pooling layer: Max pooling



#### Pooling layer: Average pooling

1	3	2	1
2	9	1	1
1	4	2	3
5	6	1	2

### Summary of pooling

#### Hyperparameters:

f: filter size s: stride

Max or average pooling

$$\begin{array}{c}
N_{H} \times N_{W} \times N_{C} \\
N_{H} - f + 1 \\
\times N_{C}
\end{array}$$