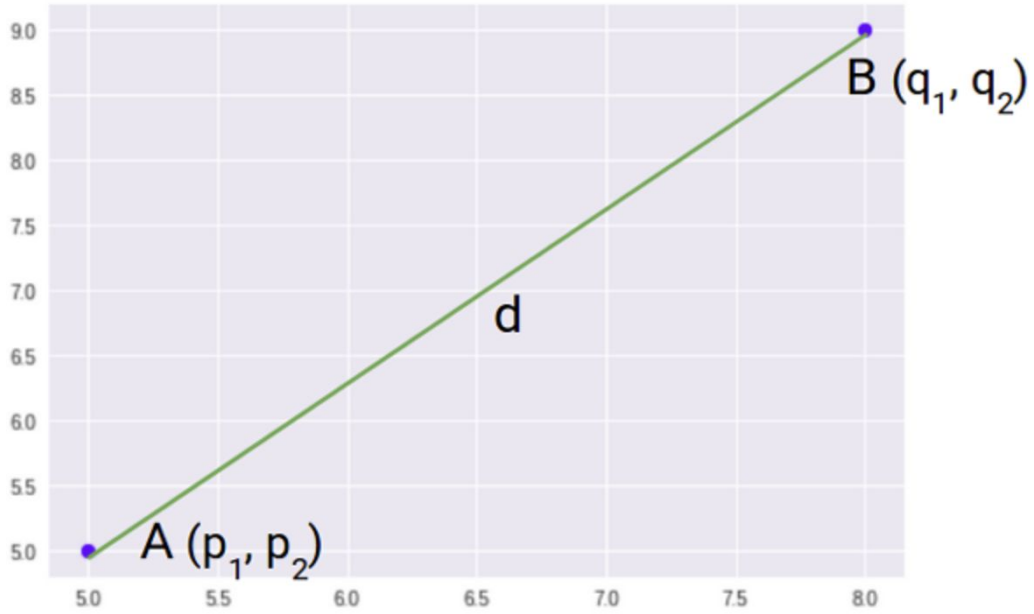
Distance metrics

Euclidean



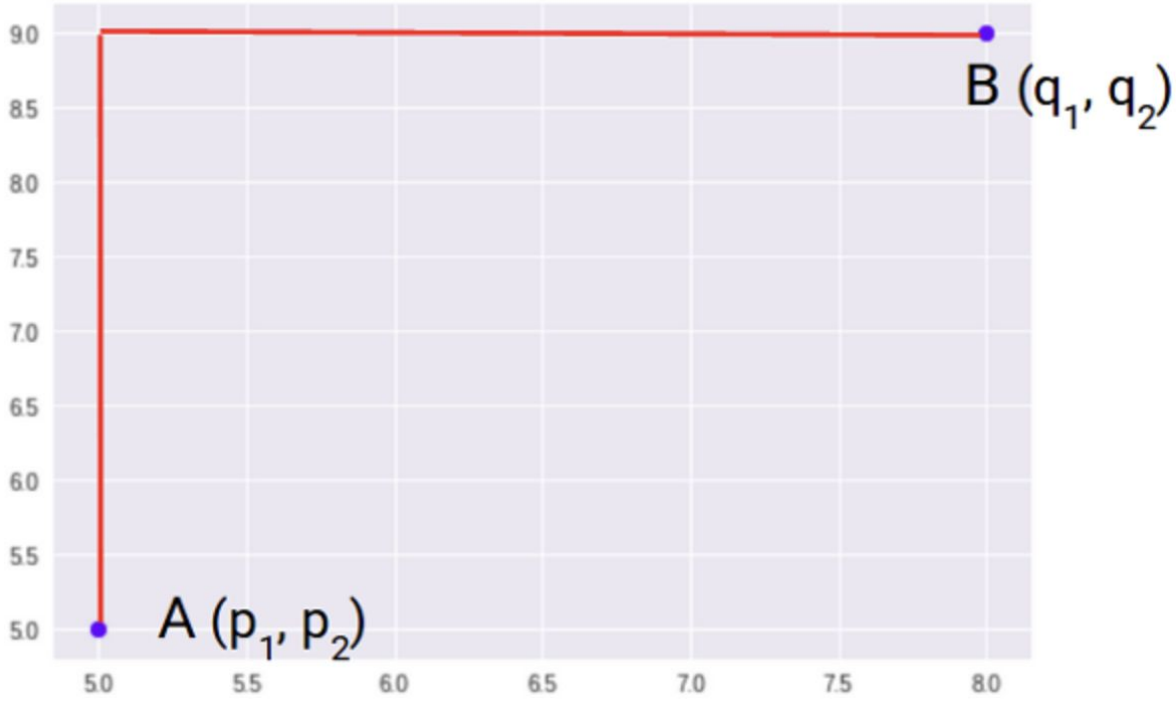
Code

```
p = [5,5]
q = [10,7]

math.dist(q,p)
```

```
5.385164807134505
```

Manhattan



Code

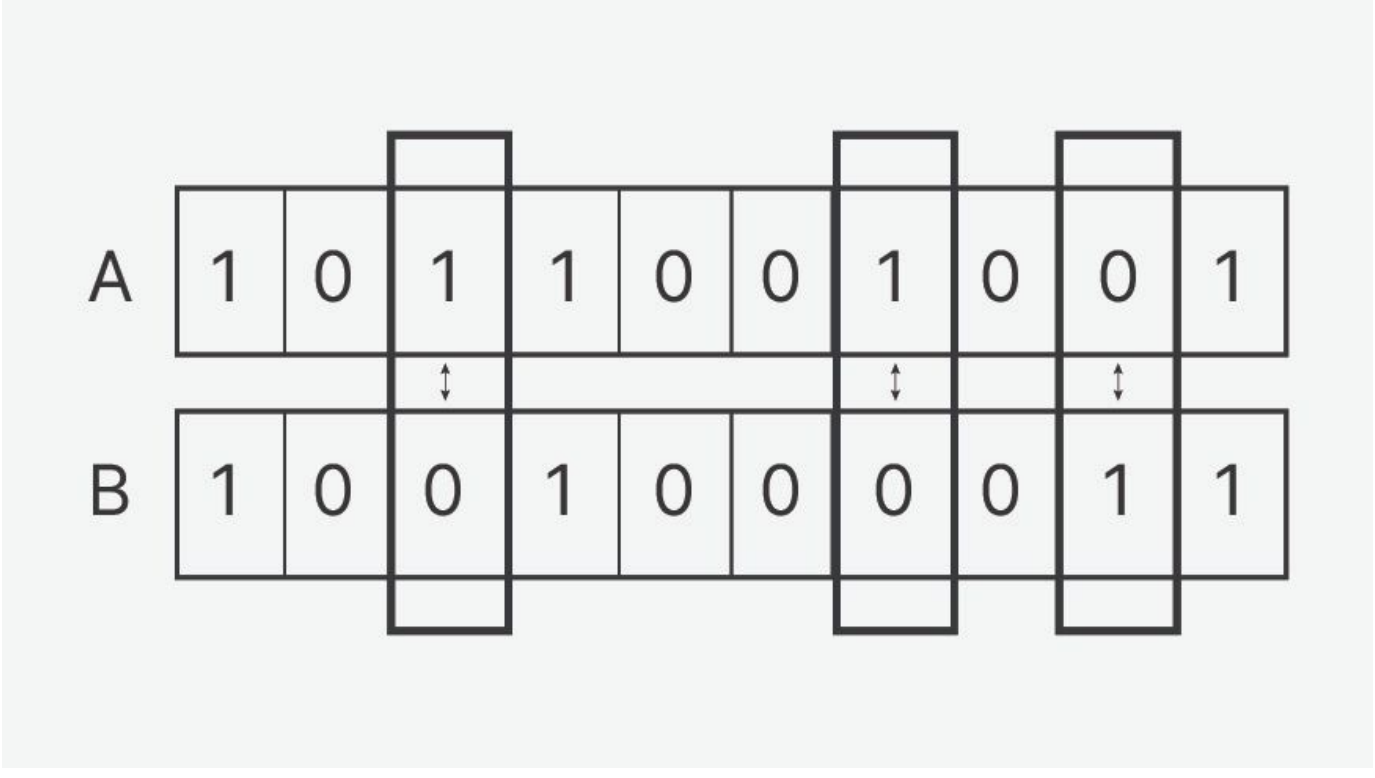
```
p = [5,5]
q = [10,7]

def manhattan(q, p):
    return sum(abs(val1-val2) for val1, val2 in zip(q,p))

manhattan(q,p)
```

```
7
```

Hamming



code

```
from scipy.spatial.distance import hamming

p = [5,5]
q = [10,7]

print(hamming(q,p) * len(q))

p = [5,5]
q = [5,7]

print(hamming(q,p) * len(q))
```

```
2.0
1.0
```