

## Euclidean distance

For 2 dimensions:

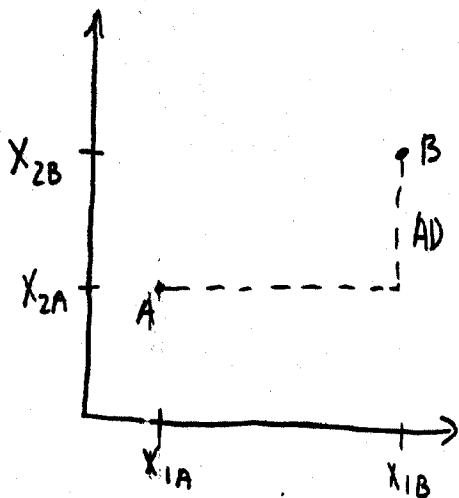
$$ED_{AB}^2 = \sqrt{(x_{1A} - x_{1B})^2 + (x_{2A} - x_{2B})^2}$$

For n dimensions:

$$ED_{AB} = \sqrt{\sum_{i=1}^n (x_{iA} - x_{iB})^2}$$

## Absolute Distance

aka City-block metric  
Manhattan metric  
taxicab metric



For 2 dimensions:

$$AD_{AB} = |x_{1A} - x_{1B}| + |x_{2A} - x_{2B}|$$

For n dimensions:

$$AD_{AB} = \sum_{i=1}^n |x_{iA} - x_{iB}|$$