

## N-DIMENSIONAL DISTANCE

## Why

Can we generalize space distance beyond three dimensions?

## **Definition**

Sure. Here's how. For  $x,y\in \mathbf{R}^n$ , define the distance between x and y to be

$$\sqrt{(x_1-y_1)^2+(x_2-y_2)^2+\cdots+(x_n-y_n)^2}$$

