Definition: Norm of a Vector

Then norm of a vector is defined to be it's length, so for any $\vec{x} \in \mathbb{R}^n$ $\|x\| \stackrel{\text{D}}{=} \sqrt{\sum_{i=1}^{n} x_i}$

$$||x|| \stackrel{\mathsf{D}}{=} \sqrt{\sum_{i=1} x_i}$$

this definition is motivated by the generalized Pythagorean Theorem