



## SPACE NORM

### Why

We generalize our notion of norm from the plane,  $\mathbf{R}^2$ , to the space,  $\mathbf{R}^3$ .

### Definition

The *norm* of a vector  $x \in \mathbf{R}^3$  is

$$\|x\| = \sqrt{x_1^2 + x_2^2 + x_3^2}.$$



