

## Introduction

Let  $X$  be a vector space over a field  $K \in \mathbb{R}$ .

definition A map  $f: X \rightarrow \mathbb{R}$  is called a norm, iff we have

(i) if  $x \in X$ , then  $f(x) \geq 0$ ; and  $f(0) = 0$ .

(ii) for all  $x, y \in X$ .