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# LADR 1A Notes

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## **1.1 Definition of complex numbers**

## **1.3 Properties of complex arithmetic**

Commutativity, associativity, identities, additive inverse, multiplicative inverse, distributive property.

## **1.5 Definition of subtraction, division in $\mathbb{C}$**

## **1.8 Definition of list, length**

## **1.10 Definition of $\mathbb{F}^n$**

$\mathbb{F}^n$  is the set of all lists of length  $n$ , with all list elements from  $\mathbb{F}$ . We call  $x_j$  the  $j^{th}$  coordinate of  $(x_1, \dots, x_n)$ .

## **1.12 Definition of addition in $\mathbb{F}^n$**

## **1.13 Commutativity of addition in $\mathbb{F}^n$**

## **1.14 Definition of $0$**

$0$  is the list of length  $n$  whose coordinates are all  $0$ .

## **1.16 Additive inverse in $\mathbb{F}^n$**

## **1.16 Scalar multiplication in $\mathbb{F}^n$**