# Contents

0.1 Big $O$ and little-$o$ notation . . . . . 1
0.1.1 Big $O$ notation . . . . . 1
0.1.2 Little-$o$ notation . . . . . 1

## 0.1 Big $O$ and little-$o$ notation

### 0.1.1 Big $O$ notation

In big $O$ notation we are interested in t he size of a function as it getes larger. We ignore constant multiples.

$cx \in O(x)$

And addition of constants.

$cx + b \in O(x)$

If there are two terms and one is larger, we keep the largest.

$x + x^2 \in O(x^2)$

More generally we write:

$f(x) \in O(g(x))$

### 0.1.2 Little-$o$ notation