

# Discrete Mathematics for Computer Science

## Chapter 1

### Sets, Proof Templates and Induction.

proof templates

шаблоны  
доказательств  
наступают

A set is a collection of elements.

The set {white, red, green} contains the names of the colors white, red and green and nothing else. The set {0, 1, 2, 3, 4, 5, 100345679231} contains seven integers. ~~The set of stamps stored in~~

primary [pri:məri]

наблюдать  
наблюдать  
первичный  
(основной)

! Task Cirogenenue 6 ammuerae agore.  
stamp - neramo.  
ellips - ...

$\in$  "is a member"  
"is an element of"  
is

принадлежит

simply  
несложно

despite

несмотря на

frequent

частот

distinction

similarly

[sim(ə)lə(r)li]

различие

аналогично

{1, 2}

Muemenbo cogermausee gpyce muamer to  
a set containing another set



the number of times  
listed  
consequently

количество раз  
перечислены  
следовательно

The Rule: 'c' as /k/ or /s/

- When 'c' comes directly before the letters 'e', 'i' or 'y' we use the /s/ sound
- in other cases we use a /k/ sound.

car /k/

carpet /k/

city /s/ it comes directly before 'i'.

ice /s/ it comes directly before 'e'.

receive it comes directly before 'e'.

• soccer /k/ *футбол*

property

character in Math.  
(свойство)

set-building notation

способ задания  
множества

(способ задания  
множества)

Множества можно задать тремя способами

(The set can be set (представлен) in three ways)

1. List  $\{0, 1, 2, 3, 4\}$

abbreviate [ə'breviət]

сокращенно

2. By a description of some property the elements have

$\{x: x \text{ is an integer and } x > -\frac{1}{2} \text{ and } x < 1\frac{1}{2}\}$



3. Describe the elements as the set of all elements in some other set that satisfy some property.

$$\{x \in \mathbb{Z} : x > -\frac{1}{2} \text{ and } x < \frac{19}{2}\}$$

Here, if  $\mathbb{Z}$  denotes the set of integers, then the set can be defined as

Множество целых чисел, удовлетворяющих  
условию