Model Theory and Set Theory

PMATH 433

Rahim Moosa

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Preface

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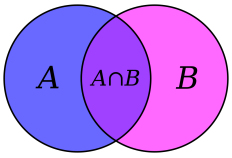

Part I:

Set Theory

> Naive set theory is any of several theories of sets used in the discussion of the foundations of mathematics. Unlike axiomatic set theories, which are defined using formal logic, naive set theory is defined informally, in natural language.
>
> *Naive set theory, Wikipedia*

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Ordinals

We use natural numbers 0, 1, 2, 3, ... to "count" finite sets. Here the word "count" has two meanings:

- enumerate, list, order. (ordinal)
- measure size. (cardinal)

Our aim is to develop ordinals and cardinals to do this work for arbitrary (possibly infinite) sets.