

Lecture 2. Motivation & Introduction to Propositional Logic

Those types of problems can be very easily solved using an area of logic called propositional logic.

What is Logic

Logic is the science of reasoning.

It helps us to understand and reason about different mathematical statements.

With rules of logic, we would be able to think about mathematical statements and finally we would be able to prove or disprove those mathematical statements precisely (准确地).

Purpose of logic is to construct valid arguments (or proofs).

Once we prove a mathematical statement is TRUE then we call it a **Theorem (定理)** and this is the basis of whole mathematics

What is proposition

Proposition is a **declarative sentence** (陈述句) (a sentence that is declaring a fact or stating an argument) which can be either TRUE or FALSE but cannot be both.