HKOI Training

$$ami \sim wkc$$

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Lecture 02

Propositional Logic and Grammar in C

Propositional Logic

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- $x \geq 3$.

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For example, all the following are proposition.

- Today is hot.
- $1 + 2 + 3 = \frac{1}{2}(3)(4)$. (Yes)
- There are infinitely many prime numbers. (Yes)
- $\left(\sqrt{x^2}\right)^2 = x$. (No)
- $x \geq 3$.
- If n is a 5-digit square integer, then $n = 29929$.

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[1] We skip a bit by using “common sense” to determine whether a sentence is a proposition or not.

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- The second unique child of God is a female.

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- The second unique child of God is a female.

Actually, some of them can be considered as statements.

However, for simplicity, we shall avoid them at this moment.

[2] This is usually called the ϵ-string

[3] The Liar paradox

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Given some propositions, we can construct another proposition from them.

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End