Discreate Maths

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Mathematical Logic is a formal framework by which you can write precise statements. Statements is ~~divided~~ devoid of ambiguity. , It brings more clarity. There are lots of branches :-

1) Propositional Logic / Boolean Logic
2) First order / Predicate logic

Formulae in propositional logic.

Reasons to study logic.

(1) Greater Precision / clarity in expression and idea.
(2) Draw correct conclusions in a rigorous framework.

atomic propositions are the smallest unit on the basis of which ~~small~~ formulae are constructed and the building blocks of Propositional logic.

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Boolean logic uses boolean constants
- ie 0 and 1

$\neg(p \wedge q) \equiv (\neg p) \vee (\neg q)$

Syntax - structure
Semantics - final interpretation
Truth Tables - ϕ - K variables
2^K assignments
no. of semantically distinct formulae on K variables is 2^{2^K}