

Mathematics Notation Language

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1 Aims

Minimising verbosity Some notation for mathematics can be verbose compared to others (compare, for example, the simple notation for indices, yet the need for an entire log function for a relatively similar operation). We aim to minimise this verbosity (of course, not all notation can be minimal) and, through this, allow quick and easy writing and typing of mathematics.

Removing ambiguity The standard equals operator ($=$) can be an equivalence, an identity, a relation, or an assignment. Whilst these operations are similar, they can be very different and using the same operator is ambiguous. We aim to remove this ambiguity, and make different operations clearly different.

Improving clarity Along a similar vein, we aim to improve notation such that similar operations appear similar (but not the same). This is necessary such that those learning mathematics can intuitively see that the operations are similar. A perfect example is that of logs, indices and roots. These operations are all very similar, yet the notation is hugely different.

Written–Typed conversion As both programmers and mathematicians, we aim to make conversion between written and typed mathematics simple. Whether this be from written notation to \TeX , or written notation to standard typed text.