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Computation

A computation is an operation that begins with some initial conditions and gives an output which follows from a definite set of rules. The most common example are computations performed by computers, in which the fixed set of rules may be the functions provided by a particular programming language.

The field of computer science studies the nature of computation and its uses, among other things. A set of rules used to carry out a computation is known as an algorithm.

SEE ALSO

Algorithm, Automata Theory, Cellular Automaton, Computation Time, Computational Irreducibility, Computational Reducibility, Generalized Mobile Automaton, Mobile Automaton, Principle of Computational Equivalence, Register Machine, Turing Machine

This entry contributed by Todd Rowland

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REFERENCES

Wolfram, S. "The Notion of Computation." Ch. 11 in *A New Kind of Science*. Champaign, IL: Wolfram Media, pp. 637-714, 2002.

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