

'Pure Mathematics' (pub. 11.09.14-10:57). Quote in M. Bergman & S. Paavola (Eds.), *The Commens Dictionary: Peirce's Terms in His Own Words. New Edition*. Retrieved from <http://www.commens.org/dictionary/entry/quote-quantity-special-reference-collectional-and-mathematical-infinity-3>.

Term: Pure Mathematics

Quote: There is *pure* mathematics and *applied* mathematics. Pure mathematicians should strenuously object to a definition which should limit their hypotheses to such as are subservient to the discovery of objective truth. A romancer who draws any necessary deductions from the situations he creates (as every romancer does) is beyond doubt doing mathematical work; and the charm of romance is in part due to the natural interest we have in tracing necessary consequences. But this is applied mathematics for the reason that the hypotheses are clothed with accidents which are not relevant to the forms of deduction. Mathematical hypotheses are such as are adapted to the tracing of necessary conclusions; the hypotheses of *pure* mathematics are stripped of all accidents which do not affect the form of deduction, that is, the relations of the conclusions to the premises.

We thus finally reach this definition. *Mathematics* is the study of the substance of hypotheses with a view to the tracing of necessary conclusions from them. It is *pure* when the hypothes[e]s contain nothing not relevant to the forms of deduction.

Source: Peirce, C. S. (1895 [c.]). *On Quantity, with special reference to Collectional and Mathematical Infinity*. MS [R] 14.

References: MS [R] 14:4

Date of 1895 [c.]

Quote:

Editorial In the original, the last line reads "It is *pure* when the hypothesis contain
Annotations nothing not relevant to the forms of deduction"

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