
Methodical aspects of approaches to teaching theory of function limits

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The article discusses some aspects of teaching the theory of limits in the course of mathematical analysis and the problems arising in presenting the educational material. To solve the difficulties in recording the neighborhood of finite and infinite points at different argument tendencies a table is offered that addresses all possible argument tendencies, described through the neighborhoods and intervals, and the Cauchy definitions of the function limit for all cases presented in the table are given. The table summarizing the uncertainties and ways to address them in finding limits of functions is also given. The techniques of calculating all possible limits are illustrated on a wide range of tasks.

Keywords: *Cauchy and Heine function limit, neighborhood of finite and infinite points, evaluation of indeterminate forms.*

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