USE OF COMPUTER ALGEBRA SYSTEMS FOR SOLVING OF LIMITS ON FUNCTIONS BY APPLYING L'HOSPITAL'S RULES

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Abstract. *Computing limits on functions by applying L'Hospital's rules to some problems can be a difficult and time-consuming process. We present procedures for checking indeterminate of the form $\left[\frac{0}{0}\right]$ and $\left[\frac{\infty}{\infty}\right]$, as well as procedures for iteratively and recursively applying L'Hospital's rules. This approach helps the work of the students in the Mathematical Analysis classes as they can concentrate not on the algebraic calculations but on the idea of the theory under consideration. By checking the time needed for performing the calculations we illustrate the benefits in using recursive procedures rather than iterative ones.*

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