

Promoting Students' Reflective Thinking of Multiple Quantifications via the Mayan Activity

Contributed Research Report

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The aim of this presentation is to introduce the Mayan activity as an instructional intervention and to examine how the Mayan activity promotes students' reflective thinking of multiple quantifications in the context of the limit of a sequence. The students initially experienced a difficulty due to the lack of understanding of the meaning of the order of variables in the definition of convergence. However, such a difficulty experienced was resolved as they engaged in the Mayan activity. The students also came to understand that the independence of the variable ε from the variable N is determined by the order of these variables in the definition. The results indicate the Mayan activity promoted students' reflective thinking of the independence of ε from the variable N and helped them understand why the order of variables matters in proving limits of sequences.

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