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Fluxions for primary school teachers in the 18th century

Abstract :

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From 1754-1769 a monthly mathematics journal for teachers, mainly in primary schools, was published in the Netherlands (Beckers, 2003). The journal was a combination of mathematics and a news sheet; this news sheet contained items on vacancies, competitive exams for new posts and other news which was of interest to teachers (Krüger, 2015). The Mathematische Liefhebberye (Mathematical Pastimes) contained some theory, many mathematical problems, with solutions by readers or the editor published a few months later and discussions on some of the solutions. The readers were encouraged to send mathematical problems and solutions on problems. The content provides insight in the mathematical knowledge of teachers in the 18th century, when there was not yet secondary education (Krüger, 2014). Most of the questions were on arithmetic, algebra and geometry combined with algebra. There were also problems which were solved using trigonometry, mainly in the context of navigation, some problems on probability and some problems which were solved with the use of fluxies (fluxions), differentiation in modern terms. The development of calculus and its use in mathematical applications in the 18th century is discussed by many authors, e.g. Bos (1993), van Maanen (2006) and Struik (1995). In this paper the types of the problems which were solved using fluxions, their origin and possible reasons why teachers in the mid-18th century would be interested in this topic, are discussed. References Beckers, D. (2003). "Het despotisme der Mathesis." Opkomst van de propedeutische functie van de wiskunde in Nederland, 1750 - 1850. Hilversum: Verloren. Mathematische Liefhebberye, (1754–1769). Purmerend: P.

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