Kyriacopoulos, L.

Peut-on tout de même parler d'un 'triangle de Pascal' ? (Can one nevertheless speak of 'Pascal's triangle' ?). (French) Zbl 1030.01016

Rev. Hist. Math. 6, No. 2, 167-217 (2000).

Summary: Around 1654, when Pascal considered the arithmetical triangle, he neither contented himself with taking stock of well-tried applications nor with extending their use to games of chance. In his collection of treatises two successive ways of solving the same set of problems are being confronted: either reading the triangle or calculations which do not take the triangle into account.

Yet, as regards proofs, the solutions without the triangle are presented as a second movement, a conclusion. These solutions however are provided on the basis of the triangle, i.e. by its readings or its properties.

Indeed, Pascal never really neglected the object which later bore his name. Between the first and the second resolutions, the triangle has not disappeared; it had only been displaced. From a means of resolution it had become a way to demonstrate, an element within a particular procedure to establish equalities (we shall call this a procedure of demonstration). Yet, this new purpose changes the very nature of the triangle. In this respect, can one eventually and rightly speak of Pascal's triangle?

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