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On mathematics education in Poland prior to 1800 – from Vitellonis's geometry to the phenomenon of the Polish Commission of National Education
Abstract :
The history of mathematics education in Poland dates back to the 10th century, the origins of Polish statehood, connected with the acceptance of Christianity. The first schools were founded at churches and educated mainly clerics, also in very elementary mathematics. Mathematical thought developed, as witnessed by the work of Polish scholars who have been educated in the major European academic centers, to which also the Cracow Academy since 1364 belonged. International contacts made mathematical knowledge known to scholars, irrespective of their nationality. For example, the Vitellon's research, which he developed in Paris, Padua and Rome after completing elementary education in Poland, was the subject of studies of Pacioli, Leonardo da Vinci, Kepler and Copernicus. The 15th century is characterized by an even more intensive 'international exchange' of scholars - Polish adepts of the sciences were educated not only in Cracow but also in Bologna, Heidelberg, Prague, and foreign scholars come to the Cracow Academy. Nicolaus Copernicus (1473-1543) was also trained in the walls of the Cracow Academy, studying mathematics and combining mathematical knowledge with the secrets of astronomy. Among the work of scholars of the 15th century there is worthwhile to draw attention to the works of Martin King (Martinus Rex de Peremislia - 1422-1460), devoted to the arithmetic fractions and geometry. The decline of the 15th century was the period of Nicolaus Copernicus' studies, which brought the work of "De Revolutionibus Orbium Coelesti". In this work we find a section devoted to the trigonometry which was an inspiration for Viete and Neper. The 16th century - the age of Renessaince - brought also an development of humanistic thought, the first works in Polish were written, the audience of knowledge was expanded, the methods of teaching mathematics were changed, the scholars more often referred to issues derived from everyday life and presented their solutions in more accessible and viewable way. The basis of Polish mathematical terminology was created. Among the great scholars of that period we can distinguish works of Adam Kochański ("Cogitata et Inventa Mathematica"), which were known to Leibniz and Hevelius, as well as Stanislaw Solski and Jan Brożek. The 18th century in Poland brought a spectacular reconstruction of the system of education. In 1773, the National Education Commission was established – the first secular institution in Europe, with the character of the modern ministry of public education, which took care of schools and academic education in Poland. The Society for Elementary Books was created, which has undertaken work on curricula, textbooks preparation and teachers education. Education is developing, new scientific centers are born, Polish mathematics is entering the 19th century, with modern textbooks for mathematics as well as classical mathematical translations into Polish, including 'Euclid's Elements'. There are foundations for the construction of the 19th and 20th century famous mathematical centers: the Warsaw and the Lviv Mathematics School. This presentation, by showing a number of authentic examples or reconstructing old

mathematical problems, will present the history of mathematical education in Poland as a part of the development of mathematical education in Europe. References: Copernicus Nicolaus, De Revolutionibus Orbium Coelestium, Kraków 1920; Dianni J., Wachułka A., Z dziejów polskiej myśli matematycznej, Warszawa 1957; Dobrowolska-Mitera M., Komisja Edukacji Narodowej, Warszawa 1973; Fuks M., 'Adam Kochański' s Approximations of Pi : Reconstruction of the Algorithm', Mathematical Intelligencer, 2012.34; Solski Stanisław, Geometra Polski, Kraków, 1683-1686; Suchodolski B., Komisja Edukacji Narodowej na tle roli oświaty w dziejowym rozwoju Polski, Warszawa 1972; Vitello, Vitellonis Thuringopoloni Optical Libri Decem, manuscript of XIII century, printed in 1572, Basylea.