

## **Abstract**

Seventeenth century is important not only for mathematics but for European social development in general. This thesis offers an overview about development of mathematics in the seventeenth century England. I present only those mathematical discoveries, which were relevant for the work of Isaac Newton. In the first part I show the construction of logarithms by John Napier, Henry Briggs and Gregory Saint-Vincent. The second part is dedicated to methods of tangents and quadrature. I describe works of Pierre Fermat, John Wallis and Isaac Barrow. In the third part is shown how Isaac Newton used the mentioned findings for the development of the calculus. I use this example to demonstrate, that historical approach offers an illustrative connection between geometry, algebra and mathematical analysis and can be used in teaching.

**Keywords:** Logarithm, tangent, quadrature, fluxion, fluent, calculus