This thesis focuses on a priori analysis as a part of teacher's lesson planning. The theoretical background consists of the Theory of didactical situations in Mathematics (TDSM). In TDSM, the a priori analysis is seen as one of the teacher's tools that he/she has when planning a lesson. The goal of the thesis is to analyse differences between a priori analysis as described in TDSM and the reality in teacher's practice, to compare lesson plans of experienced teachers with those of students and demonstrate the significance and application of a priori analysis in teacher's and researcher's practice.

The thesis consists of three parts, theoretical, experimental and applicational. In the theoretical part, the main concepts of TDSM linked with a priori analysis are explained and the issue of teacher's lesson planning is presented. The experimental part starts with a pre-experiment. Its results contributed to precise the structure of a priori analysis for further use. During the main experiment, the lesson plans of experienced teachers were compared with those of pre-service teachers. The differences and the similarities with a priori analysis were also analysed. The applicational part shows a concrete use of a priori analysis during a posteriori analysis of a lesson and describes its importance and role in a research project.