

This thesis focuses on statistical methods for equating cognitive tests, which is the process of transforming scores from multiple test versions to ensure their comparability. Divided into three chapters, the theoretical part of the thesis addresses different approaches to test equating. The first chapter presents traditional equating methods, the second explores kernel equating methods, while the third covers equating methods using Item Response Theory models. The concluding part of the thesis showcases an empirical study demonstrating the application of equating methods on a real dataset. This dataset contains responses to two versions of a math test taken by fourth-grade students in the Czech Republic as part of the 2015 TIMSS international survey.