

This bachelor thesis presents various introductions of the dot product at several levels of difficulty. First part of the thesis deals with introduction of the dot product elementary, therefore only from knowledge of high school. The more advanced parts of this thesis are devoted to the introduction of the dot product as a bilinear form and focus on properties of this form. The final chapters are devoted to the Fourier series and the first fundamental form. All theoretically explained pieces of knowledge are illustrated with examples from mathematics and physics.