This diploma thesis deals with ve classical problems of ancient Greek mathematics. It is circle squaring, cube duplication, angle trisection, circle recti cation and regular polygons constructions. The proves of insolvability of these problems as well as various attempts to solve them are presented. These include, on one hand, exact techniques breaking the Euclidean constructions rules by using special tools, curves, etc., and, on the other hand, approximate methods using only compass and straightedge. Finally, several Czech contributions to the topic are mentioned.