The thesis is based on the book D.L. Johnson, Symmetries, Springer 2001. There is a brief summary of theory from selected chapters. In particular, there are covered isometries of the plane, discrete Euclidean groups, frieze groups, plane crystallographic groups, triangle groups and convex regular polytopes of arbitrary dimension. Several fundamental theorems from group theory are listed. In the second part of the thesis, excersises from the respective chapters are work out. Exercises are mainly proofs of lemmas, or completion of proofs presented in the book. The thesis includes a complete classification of frieze groups, plane crystallographic groups, convex regular polytopes and tessellations of the plane.