

Algebra I – autumn 2024 – Homework 4

1. Determine all permutations $\rho \in \mathbb{S}_7$ satisfying $\rho^{12} = (1, 2) \circ (3, 4)$.
2. Determine a subgroup of \mathbb{S}_4 generated by

$$f = (2, 3, 4) \circ (1, 2, 3) \circ (2, 4) \text{ and } g = (1, 2, 3) \circ (3, 4).$$