

Hw 7, due October 14, 2020

1) consider the permutations

$$\pi_1 = (123)(45)(67)$$

$$\pi_2 = (467)(13)(24)$$

Find the transformation P such that $\pi_2 = P \pi_1 P^{-1}$

2) Do Exercise 14.5 of GS

3) Construct 3×3 matrices that have the same ~~per~~ multiplication rules as permutations of S_3 . Call these matrices M_k

b) Now consider an arbitrary matrix Λ with the property

$$\Lambda M_k = M_k \Lambda, \quad k=1, \dots, 6$$

Show that Λ is a multiple of the identity

4) Do Exercise 14.12 of GS