

MODERN ALGEBRA I GU4041

HOMEWORK 7, DUE OCTOBER 27: SYMMETRIC AND ALTERNATING GROUPS

1. Prove that the symmetric group S_n has a subgroup isomorphic to $\mathbb{Z}_5 \times \mathbb{Z}_5$ if and only if $n \geq 10$.
2. Judson, section 5.4, exercise 3 (a)-(c).
3. Judson, section 5.4, exercises 8, 9.
4. Judson, section 5.4, exercises 22-26.

RECOMMENDED READING

Judson's book, sections 5.2, 10.1.