MODERN ALGEBRA I GU4041

Homework 7, due March 12: Symmetric and alternating groups

1. Prove that the symmetric group S_n has a subgroup isomorphic to $\mathbb{Z}_7 \times \mathbb{Z}_7$ if and only if $n \geq 14$.

2. Judson, section 5.3, exercise 3 (a)-(c)

3. Judson, section 5.3, exercises 8, 9

4. Judson, section 5.3, exercises 22-26.

Recommended reading

Judson's book, section 5.2, sections 10.1-2.