

Problem Set 2

This assignment is due on Thursday, July 2. It covers class material from June 25–July 1, and reading from the Notes on Euler's Function $\phi(n)$ and Sections 1.7, 1.10, and 2.1–2.5 of the text.

Section 1.7: 14

Notes on $\phi(n)$: Show that formula (1) in the notes is the same as Proposition 1.9.18(a) in Goodman's book.

Section 1.10: 1, 2, 3, 4, 9

Section 2.1: 2, 12, 13

Section 2.2: 10, 15, 16, 17

Section 2.3: 6

Section 2.4: 4, 6, 7, 9, 15, 17 [Extra hint on 15: ϕ is trivial if its kernel is S_n , and $\phi = \epsilon$ if its kernel consists of all the even permutations.]

Section 2.5: 4, 6, 7, 8, 9, 12