92.421/92.521 Abstract Algebra I

Tentative List of the Home Assignments

Week	Chapter	Assigned Problems
1	2. Operations (pp.22-23)	A 1,2,5,6; B 3.
	3. The Definition of Groups (p. 29)	A 3*; B 4*.
	4. Elementary Properties of Groups (p. 39)	A 5; B 2,3,4; D 1,6*.
2	5. Subgroups (p. 49)	C 6,7; D 1,3.
	6. Functions (p.62)	A 2,3; C 2,5; D 6; e 2,6.
3 - 4	7. Groups of Permutations (p. 75)	A 2; B 2,3; F 2.
	8. Permutations of a Finite Set (p. 86)	A 1b,2b,3b,5,6a; B 1b, 2,3,5,6; C 1ad,4b; D 2,4*,6*; F 4.
4	9. Isomorphism (p. 97)	A 1,3; B 3; E 1; H 4; I 3.
	10. Order of Group Elements (p. 107)	B 2,3,7; C 3,6*; D 2.
5 - 6	11. Cyclic Groups (p. 115)	A 2; B 1,3,4,6*; C 1; D 1,2,4.
6 - 7	12. Partitions and Equivalence Relations (p.124)	A 1,6; B 1,9; C 3,6; D 3,5; E 4.
	13. Counting Cosets (p. 130)	A 3,5; B 1,3,5,7; C 2,5,6; D 1,3; E 1-6.
7	14. Homomorphisms (p.143)	A 1,2; C 3,4,8; E 4*; F 5*.
8	15. Quotient Groups (p. 152)	A 1; C 6; D 1, 3; E 1, 6.
9	16. The Fundamental Homomorphism Theorem (p. 160)	A 1,3,5; C 1,2,3; F 1-6.
10	17. Rings: Definitions and Elementary Properties (p. 174)	A 2,4,6; B 1,2,3,4; H 2,3,4; I 1,3,5,6; J 1,2,3.
11	18. Ideals and Homomorphisms (p. 185)	A 2,6; B 2,4; C 3,4,5,6; D 3,6; F 5*; I 3.
	19. Quotient Rings (p. 195)	B 3; C 1,2; G 2
12	20. Integral Domains (p. 205)	A 3,4; B 13,5. Typo: assumption “finite” Is in section B, not in A.
13	24. Rings of Polynomials (p. 246)	A 2,4b,5,6; B 4c; C 1,5,6,8; D 1,2,3; E 1,2; F 1,2,3;
14	25. Factoring Polynomials (p.255)	A 2.
	26. Substitution in Polynomials (p. 265)	I 1,2,3,5.