

Chapter 1. Integers:

- Sec 1.1 Divisors #6(a,b), 8, 10, 11.
- Sec 1.2 Primes #1(a,c), 12, 14, 15.
- Sec 1.3 Congruences #3, 18, 19, 20, 27
- Sec 1.4 Integers mod n #3(a,b), 9, 15, 25, 29, 31.

Chapter 2: Functions

- Sec 2.1 Functions #2, 5, 9(a-c), 10 (a), 11, 12, 15, 16, 18, 20.
- Sec 2.2 Equivalence Relations #1, 3, 7.
- Sec 2.3 Permutations #1(a,e), 4a, 8, 10, 11, 12, 17.

Chapter 3: Groups

- Sec 3.1: Definition of a group #2, 3, 8, 14, 15, 19, 24, 25, 26.
- Sec 3.2: Subgroups #1, 3, 5(a,b), 7, 11, 12, 14, 15, 16, 19, 21, 24, 28, 29.
- Sec 3.3: Examples #1, 2, 9, 10, 11, 12.
- Sec 3.4: Isomorphisms #1, 2, 4, 7, 9, 11, 15, 19, 21, 22, 30, 31, 32.
- Sec 3.5: Cyclic Groups #2, 3, 5, 6, 10, 12, 16, 20.
- Sec 3.6: Permutation Groups #1, 6, 7, 8, 9, 16, 17, 19, 20, 23, 28.
- Sec 3.7: Homomorphisms #3, 4, 5, 9, 10, 15, 17, 18, 21, 22.
- Sec 3.8: Cosets, Normal Subgroups, Factor Groups #1, 2, 3, 6, 10, 12, 13, 19, 20, 21, 22.

Chapter 7: Structure of Groups

- Sec 7.1: Isomorphism Theorems, Automorphisms #1, 2, 3, 4, 5, 10, 12, 13, 18, 20.
- Sec 7.2: Conjugacy #3, 4, 5, 6, 7, 8, 13, 14, 15, 16, 17, 19, 23, 24, 25.
- Sec 7.3: Groups Acting on Sets: #2, 5, 6, 7, 8, 9, 11, 12, 13, 15, 16.
- Sec 7.4: Sylow theorems #1, 10, 14, 15, 19, 22, 24, 26.
- Sec 7.5: Finite Abelian Groups #1, 2, 3(a,b), 6(a,b), 17, 18.
- Sec 7.6: Solvable Groups #4, 5, 9, 10. (optional)
- Sec 7.7: Simple Groups #1, 2, 3, 5. (optional)

Chapter 10: Groups: Selected Topics

- Sec 10.2: Internal Semidirect Products of Groups #1, 2, 4, 5, 11. (optional)
- Sec 10.3: External Semidirect Products of Groups #1, 2, 3, 4, 5. (optional)
- Sec 10.4: Classification of Groups of Small Order #5, 6, 7. (optional)