1. Factorial notation and binormal coefficients

   5.1, 5.2, 5.3, 5.4, 5.5, 5.33, 5.35

2. Counting principles

   5.7, 5.8, 5.9, 5.38, 5.39, 5.40

3. Inclusion-exclusion principle

   5.23, 5.61

4. Permutation

   5.10, 5.11, 5.12, 5.13, 5.14, 5.15, 5.41, 5.42, 5.43, 5.44

5. Combinations

   5.16, 5.17, 5.18, 5.55, 5.56, 5.57

6. Pigeohole principle

   5.19, 5.20, 5.68, 5.69

7. Proofs

   5.6, 5.28

   Examples of combinatorial proofs can be found at our class website:

   http://web.cs.ucdavis.edu/~bai/ECS20/combinatorialproof.htm