Tentative Assignments - Chapter 1 and Appendix C
(exercises from the *Abstract Algebra: An Introduction, 2nd Ed.*, Thomas Hungerford, Cengage Learning 1996)

Section	**Exercises***
1	1, 4, 5, 8, 9
2	1adg, 3, 5, 8, 11, 13, 15adg, 16, 18, 20, 33
3	1ab, 2, 6, 7a, 8, 12a 15, 17, 20
C	8, 9, 17

1. For $n, r \in \mathbb{N} \cup \{0\}$, let $\binom{n}{r} = \dfrac{n!}{r!(n-r)!}$, $0 \leq r \leq n$.

   (a) Show that $\binom{n}{r} + \binom{n}{r+1} = \binom{n+1}{r+1}$.

   (b) Use induction to show that $\sum_{r=0}^{n} \binom{n}{r} = 2^n$.

* - Graded homework exercises will be selected from assigned problems and additional handouts to be distributed throughout the semester.