

## Homework # 1

Please submit your hw as single pdf file. Your solutions should include all work you did to reach the answer. The book has the answers to some exercises at the end of chapters and in the appendix; feel free to use these answers if you find them helpful, but be sure to include all work to reach the answer. Exercises (problem 2 below) are included within the chapters while Problems (problem 3 below) are at the end of chapters.

1. Reading : Sections 1.1-1.6
2. Exercises: 1.17, 1.19 (the authors define  $A/B$  as the set of elements in  $A$  but not in  $B$ , often this is write  $A - B$ ), 1.22, 1.34
3. Problems: 3 (Hint: prove this for  $n = 2$  and then use induction, assuming the inequality is true for  $n - 1$  sets, to prove for any  $n$ ).