

Math 310, Homework 2, due 19th September 2011

- (1) Do problems 4 and 8 on pages 33–34. (Remember that there is always some vagueness regarding sets described by elements ending in ellipsis, but one hopes that we all know what elements we mean.)
- (2) Using a truth table, prove the contrapositive law: $P \Rightarrow Q$ is equivalent to $\neg Q \Rightarrow \neg P$.
- (3) Do problems 7 and 10 on page 54.
- (4) Read Theorem 1.4.7 and its proof carefully and do problem 9 on page 42.
- (5) Prove that if A, B, C are sets, then $(A \cup B) \setminus C = (A \setminus C) \cup (B \setminus C)$.