

Mathematics 574 Homework

You should read section 0.1 of the text.

- 1.** In the text do problems 0.1, 0.2, 0.3, 0.4, 0.12, 0.14
- 2.** Draw Venn diagrams for the following
 - (a) $A \cup B^c \cup C$
 - (b) $(A \cup B)^c \cup C$
 - (c) The sets A and B are disjoint, and B is a subset of C .
- 3.** Which of the following hold for all set A , B , and C .
 - (a) $(A^c)^c = A$.
 - (b) $A \cap A = A = A \cup A$.
 - (c) $A \subseteq B^c \cup C^c$.
 - (d) $B \cap B^c = \emptyset$.
 - (e) If B and C are disjoint then $B^c \cup C^c = X$ where X is the universal set.