

Math 3200 Homework 3

Due Thursday, September 4, 2003

1. Show that the following formulas are true by using the laws of Boolean algebra. You don't have to write out your reasoning in complete sentences. Instead give a "two column" style proof: Say which law of Boolean algebra is used for each step in your computation.

(a) $A \cap (B \cup C)' = B' \cap (A \cap C')$

(b) $((A \cup B)' \cup (A' \cap C)) \cap B = (A' \cap B) \cap C$

2. Problems from the textbook

Section 3.2: 3.2.4, 3.2.7, 3.2.10 ("show" means "prove"), 3.2.15

Section 3.3: 3.3.3, 3.3.4, 3.3.11, 3.3.13