

Math 108, Section 1: Fall 2009

Homework, Section 2.3

Due: Monday, October 26, 2009

Section 2.3 # 1bcdhkl, 10, plus the problems below.

1. Prove $A_k \subseteq \bigcup_{n=1}^{\infty} A_n$ for each $k \in \mathbb{N}$.

2. Prove $\widetilde{\bigcup_{n=1}^{\infty} A_n} = \bigcap_{n=1}^{\infty} \widetilde{A_n}$

3. Prove $B \cup \bigcap_{n=1}^{\infty} A_n = \bigcap_{n=1}^{\infty} (B \cup A_n)$