

Math 213 - Homework 1

Assigned: 8/24/07

Due: 8/29/07 at the start of class.

Notation: Exercise a.b.c stands for Exercise c from Section a.b.

Problems:

(1) 2.1.4.

(2) 2.1.8.

(3) 2.1.16.

(4) 2.1.20.

(5) 2.2.2.

(6) 2.2.12.

(7) 2.2.20.

(8) Suppose that A and B are finite sets. Carefully explain why

$$|A \cup B| = |A| + |B| - |A \cap B|.$$

(9) 2.3.6.

(10) Define $f : \mathbb{N} \times \mathbb{N} \rightarrow \mathbb{N}$ by $f((x, y)) = 3x + 5y$. Determine the range of f .