

Problem Set 2
Due Friday, April 18.

Mathematical Logic

Math 114L, Spring Quarter 2008

- (10 pt.) Let M be an $m \times n$ -matrix whose entries are real numbers. Let the sentence symbol a_{ij} represent the statement “the entry in the i -th row and j -th column is positive”. Specify wffs which express that
 - every row of M contains a positive element,
 - at least one column of M contains a positive element.
- (30 pt.) Give a detailed proof of Theorem 12A in the textbook.
- (10 pt.) Exercise 2 in Section 1.2 of the textbook.
- (10 pt.) Exercise 5 in Section 1.2 of the textbook.
- (30 pt.) Exercise 8 in Section 1.2 of the textbook.
- (10 pt.) Exercise 13 in Section 1.2 of the textbook.