

MM524 / DM527: Weekly Notes 2010 (Week 37)

Lectures in week 37

Tuesday 14/09

- Section 1.4 : Nested Quantifiers
- Section 1.5 : Rules of Inference
- Section 1.6 : Introduction to Proofs
- Section 1.7 : Proof Methods and Strategy

Thursday 16/09

- Section 1.6 : Introduction to Proofs
- Section 1.7 : Proof Methods and Strategy
- Section 2.1 : Sets

Exercises for discussion sections

S7: Wednesday 15.09. M1: Wednesday 15.09. S1: Friday 17.09.

1. Section 1.4

Exercise 37, 41

2. Section 1.5

Exercise 3, 9, 13a, 13b, 19, 23, 27

3. Section 1.6

Exercise 2, 5, 11

S7: Friday 17.09. M1: Friday 17.09. S1: Monday 20.09.

1. Section 1.6

Exercise 17a, 17b, 20, 39 (use a proof by contradiction)

2. Section 1.7

Exercise 5, 12, 20, 27, 45, 47

2nd Mandatory Homework Assignment

The solutions must be handed in via Blackboard latest on

Friday, September 24, 13:00.

Solutions to the problems given below need to be submitted as **one PDF file** (please ask your TA in case you do not know how to create a PDF file). Other formats are not accepted. The front page of a solution file should clearly specify

- your name,
- your discussion section name (M1, S1, or S7),
- a date and a time of when the PDF was created (such that the latest versions can be determined in case of resubmissions)

Submissions can be in Danish or English language.

Problem 1

Solve from Section 1.5 exercise 14(d).

Problem 2:

Solve from Section 1.6 exercise 18(a), 18(b).

Problem 3:

Proof that if n is an integer and $5n + 2$ is even, then n is even using

- a) a proof by contraposition.
- a) a proof by contradiction.