

## Homework 2 of CS520 Theory of Programming Languages

### Deadline: 6:00pm on 28 November 2025 (Friday)

Submit your solutions in KLMS. (Reminder: We adopt a very strict policy for handling dishonest behaviours. If a student is found to copy answers from fellow students or other sources in his or her homework submission, she or he will get F.)

The numbers in the questions refer to exercise questions in the textbook of the course, i.e. “Principles of Dependent Type Theory” by Angiuli and Gratzner.

#### Question 1

Solve 2.34. (15 marks)

#### Question 2

Solve 2.37. (15 marks)

#### Question 3

Solve 3.2. (15 marks)

#### Question 4

Solve 3.5. (15 marks)

#### Question 5

Solve 3.6. (10 marks)

#### Question 6

Solve 3.10. (15 marks)

#### Question 7

Solve 3.12. (15 marks)