

MA0301 Elementary discrete mathematics Spring 2017

Norwegian University of Science and Technology Institutt for matematiske fag

Exercise set 1

1 Basic exercises

- 1 Grimaldi's book (5. ed.): study and discuss **The Laws of Logic** (page 58-59) and the table 2.19 (page 78).
- [2] Grimaldi's book (5. ed., Exercises 2.2, page 66): solve Exercise 6
- [3] Grimaldi's book (5. ed., Exercises 2.2, page 66): solve Exercise 18
- 4 Is the following argument valid?

$$(p \to \neg q) \land (r \to q) \land r \implies \neg p$$

Detail all steps of your reasoning.

- 5 Grimaldi's book (5. ed., Exercises 2.3, page 85): solve **Exercises 8**
- 6 Grimaldi's book (5. ed., Exercises 2.3, page 85): solve Exercises 10
- [7] Grimaldi's book (5. ed., Exercises 2.3, page 85): solve Exercises 11 a,b