

# Set theory

Book: Tao – Analysis I, 3<sup>rd</sup> edition

|      |                           |                                      |  |
|------|---------------------------|--------------------------------------|--|
| 3/1  | (T) 2.1-2.3               | Peano axioms                         | No homework :)   |
| 5/1  |                           | Class cancelled                      | -  |
| 8/1  | (T) 3.1                   | Basic axioms                         | 2.2.1, 2.2.4, 2.2.6, 2.3.2, 2.3.4<br>3.1.1, 3.1.3, 3.1.7, 3.1.10 |
| 9/1  | -                         | Discussion                           | -  |
| 10/1 | (T) 3.3, 3.4              | Relations and functions              | 3.4.1, 3.4.3, 3.4.4  |
| 12/1 | (T) 3.3, 3.6,<br>8.1, 8.3 | Cardinalities of sets, countability  | 3.3.2, 3.3.5, 3.6.7, 3.6.6<br>8.1.2, 8.1.6, 8.3.3                |
| 15/1 | (T) 8.4, 8.5              | Axiom of choice, Zorn's lemma        | 8.4.1, 8.5.3, 8.5.11, 8.5.18                                     |
| 16/1 | -                         | Quiz 1                               | -  |
| 17/1 | (T) 4.1 - 4.4             | Integers, rationals and gaps in them | 4.1.3, 4.1.8, 4.2.6, 4.4.2(a)                                    |