Tutorial vs. Lecture

How tutorials have be executed?

0. Students should attend the lecture, study the book chapter, and take a look at the sheet before the tutorial.
1. **One instance for every problem type (3.13.a for example) should be solved in details (unless necessary).**
2. Students should be asked to solve (oral) another instance of the same type immediately (3.13.b for example).
3. Students should take another instance as a homework (3.13.c for example) to solve in details by hand.
4. The same steps should be repeated for the every problem type.

How an instance of every problem type should be solved in details?

1. The problem statement should be read to the students.
2. Students should be asked about what they understand from the problem statement.
3. The problem should be **explained** to the students.
4. Students should be asked if they have some *ideas* to solve the problem.
5. The basic idea for solving this type of problems should be **explained** to the students.
6. An instance of the problem type should be solved *systematic* (**step-by-step**) on the board to demonstrate.

Why not to repeat the lecture during tutorials?

1. *Understanding* the whole lecture is not necessary for solving problems.
2. Tutorial time is too short and it is hardly enough for solving some problems in details.
3. Topics are repeated during lectures as long as students ask.
4. Tutorials and lectures are less than 7 days apart and this time is short enough not to forget.
5. Students become too lazy to study the book chapter before every tutorial if they expect repeating lectures.

Why solving problems is very important?

1. Because students are expected to solve problems to pass exams.
2. Because students are expected to solve problems after graduation.

Why do students have to attend lectures?

1. They do not have to. Attendance is optional.
2. During lectures,
   a) Students get prepared for tutorials.
   b) Only few problems are solved during the whole lecture and more questions are allowed.
   c) Questions like how, why/why not, for what purpose, etc. are answered.
   d) Theoretical foundations are given for better understanding and future research.
   e) Real life applications are presented for better understanding and future development.