Midterm Take-home Exam (15 points)

Due November 4th in class.
Name: _____
Stud ID No.: _____

Instructions

Open-book exam. You should solve those problems independently. Discussion or internet-use are not allowed during the process. Copying other people's solution is strictly forbidden and would lead to 0 score. When necessary, you can do computation with the help of a computer — in that case please specify the software and/or the program you used. Recommended finishing time for this exam: 2 to 4 hrs.

1. Classify groups of order 2019 as best you can. (10 points. Hint: $2019 = 3 \cdot 673$, and 673 is prime.)

2. (Open-ended question.) Suppose that one of your younger cousins has just finished a course on linear algebra, and would like to learn a bit about group theory from you. What would you say, in respects of 1) what are the key ideas used often in group theory 2) general structure of the theory and 3) possible applications & personal comments. (5 points.)