The first question was answered in most cases well. Most students recognized that the problem in part 1a was unbounded, although in several cases the answer did not clearly state so. Part 1b was reasonably answered by most students, although many forgot to indicate and verify that also Ax=b holds for the weighted average solution. Part 1c was also answered well by most students: when the solution was given in the form of a counterexample, we accepted it. Part 1d was a source of mistakes in many cases. In particular, many answers obtained non-linear formulations involving products of variables. Such situations should have been detected as erroneous since the problem was asking for a linear program. Part 1e was done fairly well by most students, but in a number of cases the formulation erroneously included redundant or non-linear constraints.

The second question was also answered well in most cases. Specifically, part 2a was overall well received. A Common mistake consisted in forgetting to verify that the basis B was feasible (in addition to verifying the optimality condition) and that the same basis remained feasible also for all values of the parameter p in [5,9]. Almost all students responded correctly to 2b-i and 2b-ii, with more mistakes for 2b-iii as that required a more elaborate argument. Part 2c was also answered fairly well, demonstrating that students had a clear idea of what a Gomory cut is. Mistakes in this part were almost exclusively due to miscalculation/typos. Finally, part 2d was also well understood, with only a few students not having the sufficient time to respond. Different approaches were possible to attack the problem, some short and direct, others filled with calculations and more prone to typos/mistakes.