

# TMA4268 Statistical learning

Grading document for exam May 23, 2019

*Mette Langaas*

*June 12, 2019*

This document describes how the grading was done for the TMA4268 Statistical learning V2019 exam. It should be read together with the exam solutions available at <https://www.math.ntnu.no/emner/TMA4268/Exam/e2019sol.html>.

## Grading scale

Due to the high workload at the exam, the A and B lower grade limit was lowered with 2 points compared to the NTNU official grading scale. The following scale was used:

- A: 87-100 points
- B: 75-86 points
- C: 65-74 points
- D: 53-64 points
- E: 41-52 points
- F: 0-40 points

To secure a passing grade it was necessary to pass the written exam (scoring at least 28.7/70 points), and to secure a score of at least 6/15 for each of the two compulsory exercises.

## Grade statistics

A total of 109 students got a valid score on the compulsory exercises, and of these 106 students met for the written exam. Of these four students handed in a blank exam, and the remaining 102 exam papers were graded.

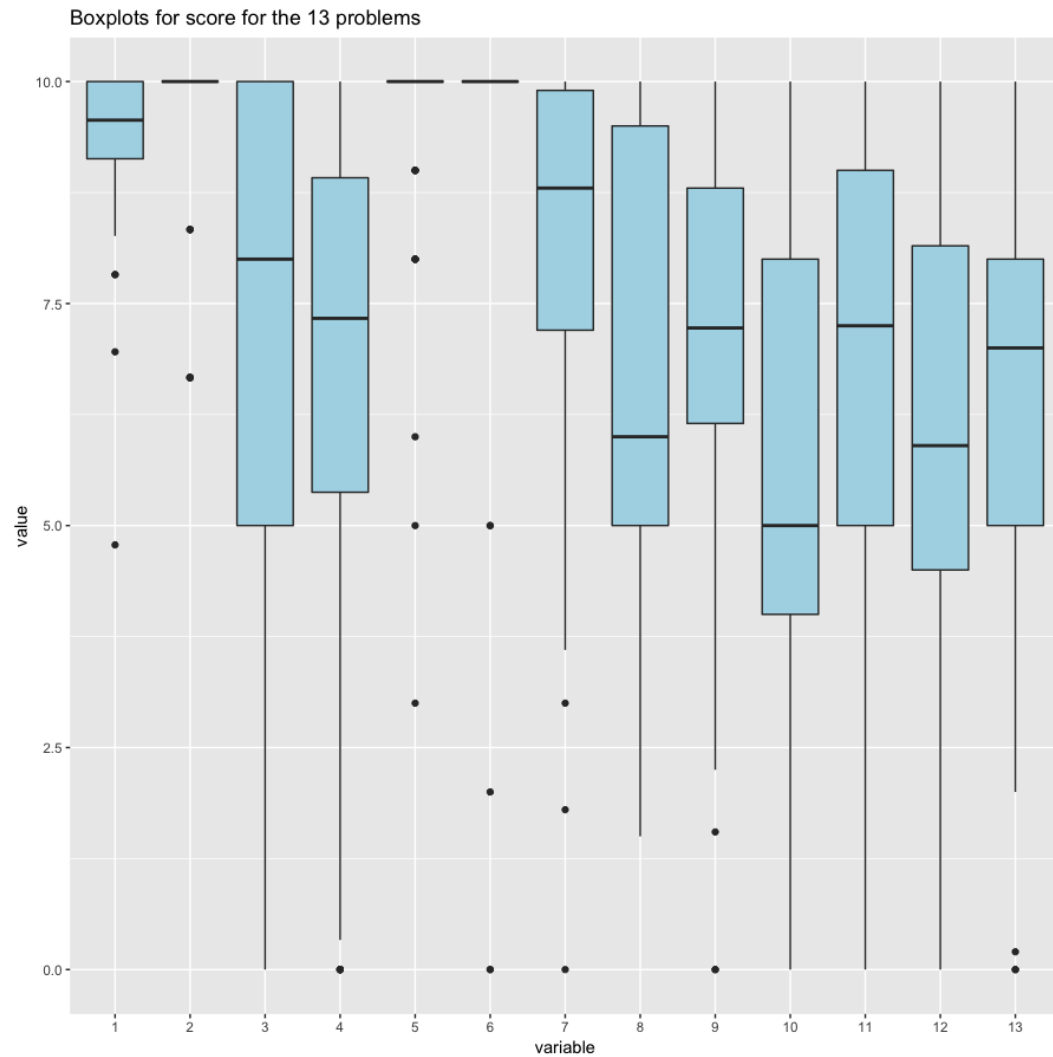
Grade percentages (for the 102 nexams)

Grade	A	B	C	D	E	F
	32	35	20	11	0	2

## Scores for the 13 problems

The average score (0-10) for each of the 13 problems is given below, and median and quartiles are shown in the boxplot.

Problem	1	2	3	4	5	6	7	8	9	10	11	12	13
	9.28	9.74	7.00	6.60	9.70	9.63	8.09	6.85	7.18	5.74	6.81	6.06	6.43



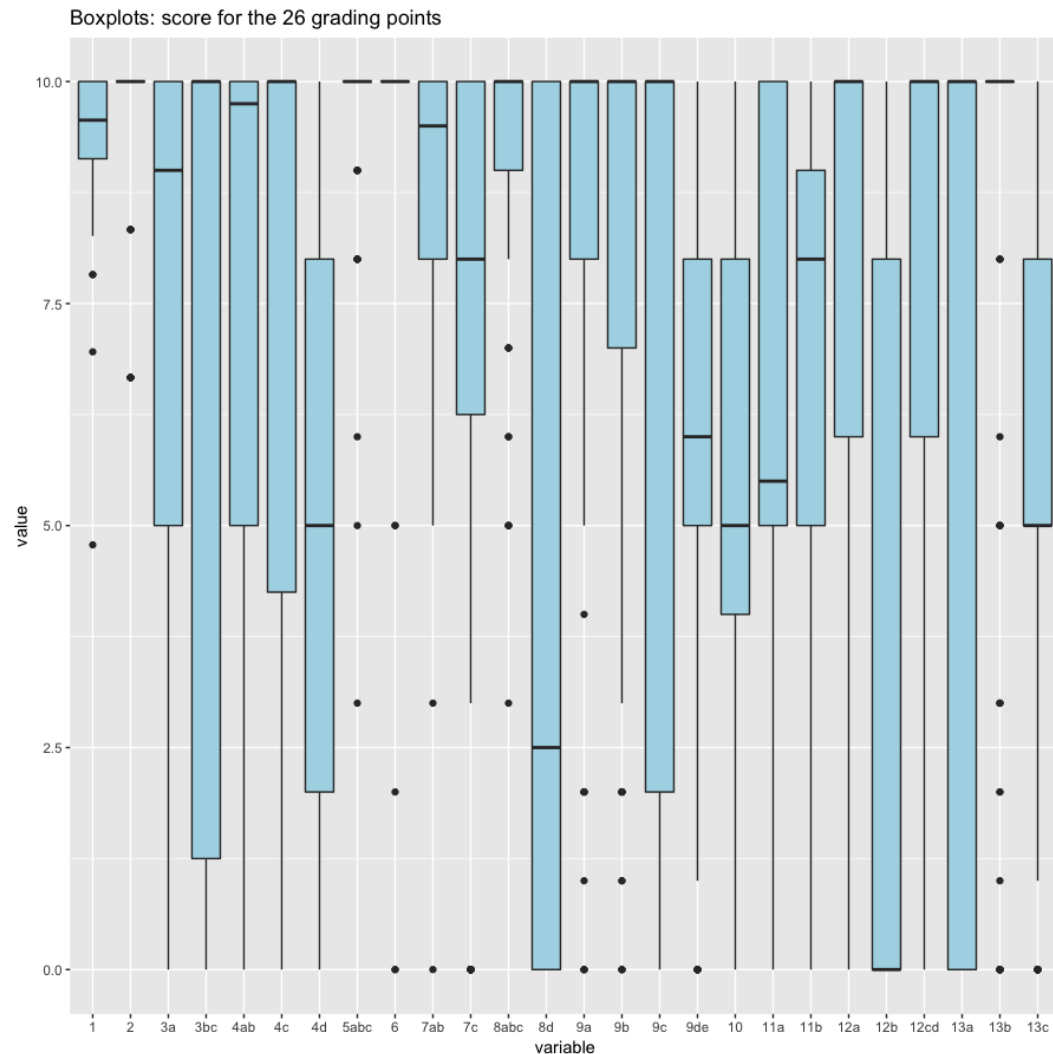
## Weighting of questions

The maximal possible score for each of the 13 problems was given on the exam. A more detailed break down was used for the grading. For different groups of questions within each problem, the maximal score is given below. *This detailed grading scheme will also be used for complaints (klager).*

problem	1	2	3a	3bc	4ab	4c	4d	5abc	6	7ab	7c
score	3	2	2	2	3	1	2	3	2	3	2

problem	8abc	8d	9a	9b	9c	9de	10	11a	11b	12a	12b	12cd	13a	13b	13c
score	5	5	2.5	2.5	1	4	6	2	2	3	4	3	1	1	3

The median and quartiles for the score (0-10) for each of the 26 grading points (1-13c) are shown in the boxplot below. Observe that 12b has the lowest median (at 0), followed by 8d (at 2.5), and then 4d, 10 and 13c (jointly at median 5).



## Explanation of grades (begrunnelse)

We are part of a pilot project where explanation of grades is ordered through StudentWeb, and the grades are explained on Inpera. From the date where the grades are available at StudentWeb there is a 1 week deadline to ask for explanation of the grade. At StudentWeb I have been told that there will be a button next to the TMA4268 grade, where the student presses to ask for explanation (begrunnelse). A message will then be sent through several NTNU-systems and finally arrive at Inpera, giving me a signal to produce an explanation of the grade. This is supposed to be much faster than the old system at IE which involved several forms and people.

If this doesn't work, please inform me Mette.Langaas@ntnu.no or Elin Merethe Todal at Elin.Merethe.Todal@ntnu.no.

Complaints are handled in the old fashion way, that is, not in Inpera.

## Continuation exam

As of the date of this document, it is not decided if the continuation exam will be a written exam (in Inspira) or an oral exam. This depends on the number of students who sign up to attend the continuation exam.

The continuation exams at NTNU will be held in weeks 32 and 33.