

Midterm 2 will cover Chapter 9.

The midterm will be posted at 8 am on Friday March, 20 onto blackboard and is to be uploaded onto Gradescope before 10PM. Ideally, you should print out the exam, take it as a normal exam and then scan and upload it. If you cannot print it, solve each problem on it's own sheet of paper.

During that time interval you choose 3 hours that you will work on the exam. For ethical as well as practical reasons, more time will not significantly change your grade, you should not spend 3 hours on it. Some of the questions might be unreasonably hard, and you should not expect to solve them all, however hopefully you can make some progress.

If you anticipate hardship taking the exam on Friday, please talk to me as soon as possible.

The next page is a sample of what the front page will look like. I expect it to be 6 problems, plus or minus 1 problem.

You should be able to:

- Compute the variance of an estimator and the relative efficiency of two unbiased estimators.
- Show a (sequence of) estimators is consistent by using Tchebysheff's inequality, the weak law of large numbers or the definition directly.
- Use the factorization criteria theorem to show a statistic is sufficient.
- Use the Rao-Blackwell theorem to argue that a given estimator is the MVUE.
- Find estimators using the Method of Moments and maximizing the likelihood function.
- Whatever else was on the homework.

The unstarred problems in the back of Chapter 9 are good for practice, as are many of the problems for the chapter.

Calculators will not be needed, but I guess you can use them.