

Homework 7 - Due Friday, April 1

Do Problems 9.101 and the problem below

If you want more problems I recommend but will not collect: 9.8, 9.28, 9.52, 9.55, 9.63, 9.79, 9.88, 9.92.

Homework should be written neatly and clearly explained. If it requires more than one sheet, the sheets must be stapled. Include your name and id number in the top right corner of your homework.

**Problem 1.** Let  $Y_1, \dots, Y_n$  be a random sample from the population density:

$$f_Y(y; \theta) = \frac{1}{\sqrt{2\pi\theta}} e^{-y^2/(2\theta)}$$

(that is  $Y_i$ 's are iid Normal random variables with mean 0 and variance  $\theta$ ).

Compute  $I_{Y_1, Y_2, \dots, Y_n}(\theta)$ , the Fisher Information.