

01325 Mathematics 4, Spring 2013

Week no. 3

Theory: In the week February 18-22 the lectures cover

Sections 4.1–4.4.

Question Session: We have arranged a weekly Question Session (“spørgetime”)

Mondays 12:00-12:50 in Room 026, Building 303 S.

The instructors will take care of the question session. They will answer all questions related to the course, except the home work. If you happens to have a question concerning the home work, They will help you by pointing to a similar question from the set of regular exercises.

Exercises for the week February 18-22: 4.3 (start with the proof of (iv), via direct calculation of the right hand side), 4.1, 4.11, 4.4 (hint below) , 4.8, 4.12, 4.9*

(I am confident that this program is enough, but if you want an extra challenge you can look at Exercise 1.15)

Hint to Exercise 4.4: In general, to show that two quantities are equal, one can do it by proving the two inequalities “ \leq ” and “ \geq ”. Use Cauchy–Schwarz’ inequality to prove one of these, and put $\mathbf{w} = \mathbf{v}/\|\mathbf{v}\|$ to show the other inequality.

Homework 3, to be turned in no later than February 27: 2.15 (the reference to Hölder is Theorem 1.7.3(i)), 4.2, 4.5

Regards,
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