Homework set 3

You are requested to solve the following exercises from the book. Please send your solutions to Hans Zwart, Department of Applied Mathematics, University of Twente, P.O. Box 217, 7500 AE Enschede, e-mail: h.j.zwart@utwente.nl, or hand them in during the lecture.

- Exercise 7.3
- Exercise 8.1
- Exercise 8.2
- Exercise 8.5

The hint should be: You may use the following fact: If a continuous, non-zero, scalar function $f$ satisfies $f(t + s) = f(t)f(s)$ for all $t, s \in [0, \infty]$, then $f(t) = e^{\lambda t}$ for some $\lambda$.

You may want to try to prove this hint.

- Exercise 9.1

The final hand-in date is May the fourth.