# Assignment 10

## Mandatory questions to be answered orally

1. Exercise 9.14 from the yellow book.

2. Exercise 10.6/a from the yellow book.

3. Exercise 10.8 from the yellow book.

4. Exercise 10.10/a,b,c from the yellow book.

5. Exercise 10.10/d from the yellow book.

6. Exercise 10.12 from the yellow book.

## Mandatory question to be answered in writing

1. Consider the sequence $a_1, a_2, \ldots$ given by $a_1 = 1$ and the recursion formula $a_{n+1} = \sqrt{(a_n^2 + 5)/2}$. Prove that the sequence is increasing and bounded, thus it has a limit. Calculate the limit.