

## Assignment 7

### Oral questions

1. Exercise 29.2
2. Exercise 29.4
3. Exercise 29.6
4. Exercise 29.10 ac
5. Exercise 29.14
6. Exercise 29.16

### Question to be answered in writing

1. Exercise 29.10 b

*Hint:* Show that the derivative of  $f(x)$  is negative for every  $x = x_n$  of the form  $x_n = 1/(2n\pi)$ , where  $n$  can be any positive integer. Using

$$f'(x_n) = \lim_{y \rightarrow x_n^-} \frac{f(y) - f(x_n)}{y - x_n}$$

argue that  $f(y) - f(x_n)$  must be negative for some  $y < x_n$ .