EBA2911 Mathematics for Business Analytics
autumn 2021
Exercises

Lecture 12
on Monday 1 Nov. 15-16.45
Problems from the course paper

There is no tutoring session after this lecture.

Here are recommended exercises from the textbook [SHSC].

Section **6.10** exercise 1, 4, 5
Section **6.11** exercise 1-3, 6, 7

Problem Compute the expression for the derivative of $f(x)$.

a) $f(x) = \ln(x^2 - 7x + 13)$ b) $f(x) = e^{0.035x^2}$ c) $f(x) = \sqrt{e^{2x} + 4x + 5}$ d) $f(x) = \dfrac{x}{\ln(1-x)}$

Answers

Problem

a) $f'(x) = \dfrac{2x - 7}{x^2 - 7x + 13}$

b) $f'(x) = 0.07xe^{0.035x^2}$

c) $f'(x) = \dfrac{e^{2x} + 2}{\sqrt{e^{2x} + 4x + 5}}$

d) $f'(x) = \dfrac{(1-x)\ln(1-x) + x}{(1-x)[\ln(1-x)]^2}$