Aalto-universitetet
Björn Ivarsson

noindent **Homework 2, due Monday 15th March 2021 at 23:59.**
Differential and integral calculus 3, MS-A0311.

The solutions will be presented by you or someone of your fellow students.

(1) Let $F(x, y) = (e^x, e^{-x})$. Determine the integral curves for the vector field. $(4p)$

(2) Let $F(x, y) = (2x - 2y, 2y - 2x)$. Show that F is a conservative vector field by constructing a potential function. Determine the equipotential curves and the integral curves for F. (4p)

(3) Let $F(x, y) = (x, 1/y)$. Where is the vector field defined? Determine the integral curves for F. $(4p)$