This week on the problem set you will get practice thinking about potential functions and calculating line integrals.

Homework: The second homework will be due on Friday 17 February, at 12pm, the *start* of the lecture. It will consist of questions:

$$17.2.24, 17.2.44 \text{ and } 17.2.67$$

*Numbers in parentheses indicate the question has been taken from the textbook:

J. Rogawski, C. Adams, *Calculus, Multivariable*, 3$^{\text{rd}}$ Ed., W. H. Freeman & Company,

and refer to the section and question number in the textbook.

1. (Section 17.1) Questions $13 - 17, 22, 23, 28, 29$.

2. (Section 17.1) $38, 41, 44, 45, 50, 54^*$.

3. (Section 17.2) $3, 9, 12, 13, 21, 24, 27, 41, 42, 44, 45, 52, 53, 55, 61, 64, 67$.

*The questions marked with an asterisk are more difficult or are of a form that would not appear on an exam. Nonetheless they are worth thinking about as they often test understanding at a deeper conceptual level.