This week on the problem set you will get practice thinking about potential functions and conservative vector fields as well as the basics of parametrised surfaces and surface integrals.

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

J. Rogawski, C. Adams, *Calculus, Multivariable*, 3rd Ed., W. H. Freeman & Company,

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

1. (Section 17.3) 1, 4, 5, 6, 9, 11, 12, 15, 16, 18, 23, 25, 28, 29, 31*.
2. (Section 17.4) 2, 3, 5, 8, 9, 10, 13, 14, 15, 16.

*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.