Week: October 12 – October 18 , 2020
Topic: **Determinants, eigenvalues and inverse matrices**

The below provided instructions should guide you through studying the topic. For additional explanation, clarification and extra material contact the Lecture/Tutorial teacher by email or the MS-Teams platform for live online consultation (see webpage for the link).
https://mat.nipax.cz/mathematics:mathematics_i

1) Read and learn the explanation from the textbook (**pages 14-17, 26-29**).
Scanned pages can be found on the web page.
https://mat.nipax.cz/_media/mathematics:ma1_en_textbook_part_i.pdf

Additional material and alternative explanation with many figures and exercises can be found in (free) online available textbooks
http://www.math.wisc.edu/~keisler/calc.html
namely chapter 10 http://www.math.wisc.edu/~keisler/chapter_10.pdf

https://openstax.org/details/books/calculus-volume-3
namely chapter 2 https://openstax.org/books/calculus-volume-3/pages/2-introduction
You may also take a look at
https://openstax.org/details/books/college-algebra
namely chapter 7 https://openstax.org/books/college-algebra/pages/7-introduction-to-systems-of-equations-and-inequalities

2) As a training solve (at least) the specified exercises from *Selected problems from the textbook Problems in Mathematics I*
https://mat.nipax.cz/_media/m1_selected_problems.pdf
Inverse matrices: **149, 168, 174, 178**
Eigenvalues and eigenvectors: **243, 246, 253, 258**
See the *plan of tutorials* for full list of recommended exercises
https://mat.nipax.cz/_media/mathematics:ma1_2020_tutorials_info.pdf

3) Try to solve the corresponding exercises and answer the questions from older exams.
https://mat.nipax.cz/_media/m1_probl_from_prev_exams.pdf
This should be your check point to verify if you understood the chapter sufficiently to pass the exam. In case you want to verify your results and answers, or need additional explanation, consultation or study material, contact your teacher (tutorial or lecture).

4) As a long term homework, to be delivered by parts (by chapters) according to deadlines specified by the tutorial teacher, solve the corresponding exercises from
https://mat.nipax.cz/_media/mathematics:ma1_exam_1_en.pdf
https://mat.nipax.cz/_media/mathematics:ma1_exam_2_en.pdf
https://mat.nipax.cz/_media/mathematics:ma1_exam_3_en.pdf

DEADLINE: October 30, 2020 for the first part of the homework
(1st exercise from Exam 1, 1st and 2nd exercise from Exam 2 and Exam 3).