Week: March 23 - March 29, 2020
Topic: **Triple integral**

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_ii

This week the practicing of double integral will continue and triple integral will be started. The following information is related to triple integral.

1) Read and learn the explanation from the textbook. Scanned pages can be found on the web page.
https://mat.nipax.cz/_media/mathematics:pages_56-69.pdf
At the end of the chapter please note the explanation about transformations in multiple integrals and see the exercises for both, the double and triple integrals.

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 12 http://www.math.wisc.edu/~keisler/chapter_12.pdf

https://openstax.org/books/calculus-volume-3/pages/1-introduction
namely chapter 5 https://openstax.org/books/calculus-volume-3/pages/5-introduction

2) Take a look at the solved exercises from our collection of examples
questions: https://mat.nipax.cz/_media/triple_integral.pdf
complete solutions (in Czech): https://mat.nipax.cz/_media/trojny_integral.pdf

3) As a training solve (at least) the following exercises.
380, 381, 387 – solved without substitution (transformation)
393, 402, 421 – solved with substitution (transformation)

4) As a long term homework, to be delivered at your return to the school (at latest at the end of semester, prior getting the assessment from tutorials), solve all the triple integral exercises from sample exams from our webpage
https://mat.nipax.cz/_media/mathematics:ma2_exam_1_en.pdf
https://mat.nipax.cz/_media/mathematics:ma2_exam_2_en.pdf
https://mat.nipax.cz/_media/mathematics:ma2_exam_3_en.pdf