

Week: November 30 – December 6, 2020

## Topic: **Indefinite 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\\_i](https://mat.nipax.cz/mathematics:mathematics_i)

1) Read and learn the explanation from the textbook (**pages 95-110**).

Scanned pages can be found on the web page (integral calculus part will be added during the week).

[https://mat.nipax.cz/media/mathematics:ma1\\_en\\_textbook\\_part\\_iii.pdf](https://mat.nipax.cz/media/mathematics:ma1_en_textbook_part_iii.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>

[http://www.math.wisc.edu/~keisler/chapter\\_4.pdf](http://www.math.wisc.edu/~keisler/chapter_4.pdf)

<https://openstax.org/details/books/calculus-volume-1>

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

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](https://mat.nipax.cz/media/m1_selected_problems.pdf)

Methods of integration: **1486, 1489, 1494, 1516, 1534, 1666**

Integrals of rational functions: **1733, 1739, 1749**

See the *plan of tutorials* for full list of recommended exercises

[https://mat.nipax.cz/media/mathematics:ma1\\_2020\\_tutorials\\_info.pdf](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](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_1_en.pdf)

[https://mat.nipax.cz/media/mathematics:ma1\\_exam\\_2\\_en.pdf](https://mat.nipax.cz/media/mathematics:ma1_exam_2_en.pdf)

[https://mat.nipax.cz/media/mathematics:ma1\\_exam\\_3\\_en.pdf](https://mat.nipax.cz/media/mathematics:ma1_exam_3_en.pdf)

**DEADLINE: December 4, 2020 for the second part of the homework  
(exercise 2, 3, 4 from Exam 1, exercise 3, 4 from Exam 2 and Exam 3).**