

ALGORITHMIC MATHEMATICS

[Practice 1. Preliminary exercises](#)

<https://docs.google.com/presentation/d/1RhSOiFMdv0YDjQwe-AtlTUomrALT9gz6MG8qnK407Ik/edit#slide=id.p>

[LECTION 1 + PRACTICE 2. Fundamentals of Computational Complexity Theory](#)

<https://docs.google.com/presentation/d/1JrfNvYCuw3JZjN7TkR96DhmA2Su7Ym-E-br2N2XXod8/edit#slide=id.p>

[PRACTICE 3. Representation of numbers](#)

<https://docs.google.com/presentation/d/1Bdc7aOPTedBOoO1TAyXei1Ex9018ulfNM1BgMuBAGfk/edit#slide=id.p>

[LECTION 2 + PRACTICE 4. Discrete logarithm](#)

<https://docs.google.com/presentation/d/1UitCJpIFz-cdqorJxD0TS0oMDyU1COPxCVFbxqYuRig/edit#slide=id.p>

[PRACTICE 5. P-ADIC NUMBERS](#)

https://docs.google.com/presentation/d/1QbXDVEpy1hNuuPw9Vp9_u6Y4yQ-KuJe0655t--yWvJw/edit#slide=id.p

[PRACTICE 7. Kroneker's algorithm](#)

<https://docs.google.com/presentation/d/1TZKYWxwZSP5dUHPNAfbKK3FIB-WySf0wnkZWzM1svKM/edit#slide=id.p>

[PRACTICE 8. LECTURE 4. Berlekamp's algorithm](#)

https://docs.google.com/presentation/d/1bVjSuT4N6Vz4mz070hL8tquTi6WWr_EhIB5aBfP9WsE/edit#slide=id.p

[PRACTICE 9. Extended Euclidean algorithm for polynomials \(Preparing to Hensel's lifting algorithm\)](#)

https://docs.google.com/presentation/d/1tBZW_SO9AAj0CzmlyJCTGkNvsMzcSn5tLndL4Bu_f98/edit#slide=id.p

[PRACTICE 10. Lecture 5. Hensel's lifting algorithm](#)

https://docs.google.com/presentation/d/1L-_4G3PFJQmiM4_HR7pvrJ2QD6N4JPiNimWiQgRYmOA/edit#slide=id.p

[PRACTICE 11. Ideals and introduction to Gröbner bases](#)

https://docs.google.com/presentation/d/1jZKHPCbjslaggGsWb-0_sdxvdlkO_-B2FkgiHWEY30/edit#slide=id.p

[PRACTICE 12. Lecture 6. Gröbner bases](#)

<https://docs.google.com/presentation/d/1wRHs0DHIBV5ei2MVR-bWjxFpJ7kAA5ySwEf5G4NNouU/edit#slide=id.p>

[Practice 13. Intermediate testing](#)

<https://docs.google.com/presentation/d/1Q23ECeDKoUmkdINpAWKzgTt8wpupD13LOtXvATnA4Y/edit#slide=id.p>

[Practice 14. Lektion 7. Fast Fourier transform \(FFT\). Cooley–Tukey FFT algorithm](https://docs.google.com/presentation/d/1qku9NJIOS1G4eM5Uoj1pugaxwCw6NpdsBYOwRNUH-4g/edit#slide=id.p)

<https://docs.google.com/presentation/d/1qku9NJIOS1G4eM5Uoj1pugaxwCw6NpdsBYOwRNUH-4g/edit#slide=id.p>

[Practice 14. PREPARING TO EXAM ON ALGORITHMIC MATHEMATICS](https://docs.google.com/document/d/10cqj16gDV7tuho_pLUAS4jYQADfs6vnm5Dw_eEP4xKk/edit?usp=sharing)

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