

Junior Knights Contest Course Spring 2025 3/29/2025 – Outline

10:15 am – 11:15 am

I. Lecture on Number Theory for Competitive Programming

- a. Prime Factorization
- b. Prime Sieve
- c. GCD/LCM
- d. Modular Inverse
- e. Number of Divisors/Sum of Divisors
- f. Number of times prime p divides into $n!$
- g. Euler Phi Function

11:15 am – 11:30 am

Break

11:30 am – 12:50 pm

III. Practice Problems

- a. <https://open.kattis.com/problems/happyprime>
- b. <https://cses.fi/problemset/task/1095> (Exponentiation)
- c. <https://cses.fi/problemset/task/1712> (Exponentiation II)
- d. <https://cses.fi/problemset/task/1713> (Counting Divisor)
- e. <https://cses.fi/problemset/task/1081> (Common Divisors)
- f. <https://cses.fi/problemset/task/1082> (Sum of Divisors)

REMINDER: NEXT MEETING IS APRIL 5, 2025, next Saturday.