Algebra 2010-Aalborg University

16th Lecture: Tuesday November 16th, 8:15-12:00 at room G5-112.

- 8:15-8:45 Repetition from last lecture. Equivalence relations and construction of $\mathbb{Q}$. Field of fractions. Unique factorization (pages 227, 123–124 (only two first lines of 124), introduction of 3.5 (page 125) and 3.5.1 (page 126)).

- 8:45-10:45 Work in groups. Exercises from [Lau], 3.6 (page 138) + 2 exercises: 24, A, 23, B, 16, 13, 15 + some exercises from previous lectures that you did not solved yet.

  Exercise A: Let R be an integral domain. Prove that for $a, b \in R$: $ab \in R^*$ if and only if $a, b \in R^*$.

  Exercise B: Check that the relation defined in page 123 is an equivalent relation and the two operations are well defined.

- 10:45-12:00 Lecture: Unique factorization: Irreducible elements and prime elements. Unique factorization domain. (pages 126–130)

Best regards,

Diego Ruano